Technical Assistance Catalog

Department of Homeland Security

Office of Emergency Communications

Version 3.1

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OEC Technical Assistance (TA) Catalog

Introduction

T he mission of the Office of Emergency Communications (OEC) is to support and promote communications for emergency responders and government officials during all hazards and threats. Since 2007 the OEC Interoperable Communications Technical Assistance Program (OEC/ICTAP) has delivered over 1,000 technical assistance courses and workshops in every State and Territory to enhance the capabilities of emergency responders and government officials to communicate in the event of natural disasters, acts of terrorism, or other man-made disasters. OEC/ICTAP enhances interoperable communications among Federal, State/Territory, local, and tribal emergency responders and public safety officials as well as promotes national security and emergency preparedness (NS/EP) communications.

The goal of the program is to ensure, accelerate, and attain operable and interoperable emergency communications nationwide. OEC/ICTAP is managed and supported by the Technical Assistance (TA) Branch, OEC. At OEC's direction, technical assistance services and deliverables are provided by consulting staff under contract to the Space and Naval Warfare Center (SPAWAR), San Diego, the implementation arm for the program.

OEC/ICTAP provides support for planning, operations, technical issues, and policy decisions that need to be considered when implementing interoperable communications initiatives. The goal of the program is to improve the capabilities of public safety agencies across multiple disciplines and jurisdictions to communicate effectively as they work to manage disasters, emergency incidents, and planned events.

In FY2012 and 2013, OEC focused on educating and supporting stakeholders with issues of governance and outreach for implementation of the National Public Safety Broadband Network (NPSBN). The TA Branch has been actively supporting the Department of Commerce's National Telecommunications and Information Administration (NTIA) and the FirstNet Board in their efforts to reach out to the public safety community and support the most significant development in public safety interoperable communications in the past 25 years.

At the same time, land mobile radio (LMR) systems continue to be a mainstay for public safety voice communications, and OEC/ICTAP will continue to make every effort to support stakeholders' requirement to meet LMR challenges.

Availability of OEC/ICTAP Services

OEC/ICTAP services are supported by Federal funding and are provided at no cost to authorized requesting agencies or organizations. Because funds and resources are limited, OEC, in collaboration with requestors, will prioritize which requests may be accepted and which may have to be deferred.

OEC/ICTAP service offerings fall into the following categories:

- **Governance**
- **Standard Operating Procedures (SOP) and Communications Support**
- **Communications Unit Training and Support**
- **Communications Exercise and Operational Support**
- **Broadband Support to NPSBN/First Net**
- **Communications Systems Engineering Support**
- **Tactical Communications Enhancement Support**
- **Regional Communications Enhancement Support**
- **Tribal Nation**
- **Communication Assets Survey and Mapping (CASM) Support**

The Catalog provides a short description of each offering which highlights the specific services within that offering. Each description is preceded by an abbreviation, for example, TRG-COML, which is used by OEC/ICTAP to track offerings by a specific category. These acronyms are also part of a "pick list" in the automated TA Request form system.

The descriptions are not intended to be all inclusive and unless otherwise noted, the content and format of the assistance provided can be tailored to meet a stakeholder's specific requirements.   The offering descriptions also identify any prerequisites and logistical or other requirements for which the requestor will be responsible. Generally, these are one-day, on-site offerings unless otherwise noted. The OEC/ICTAP staff will coordinate all these matters with the site's POC when scheduling on-site engagements.

New or revised TA offerings in this version are labeled beside the title of the service offering. They include:

- Communication Unit Planning Workshop (GOV-COMUPLAN, p. 8)
- Project Management (GOV-PRJMGMT, p. 12)
- Communications Unit Exercise (OP-COMMEX, p. 41)
- Communications-Focused Operational Exercise Design (OP-EXDESIGN, p. 43)
- Use of Handheld Radios "Just-in-Time" Training Program Development (OP-HANDHELD, p.48)

- Post-Incident After Action Report (OP-INCDNTAAR, p. 49)
- Operational Strategic Technology Reserves Mutual Aid Compacts (OP-STREMAC, p. 56)
- Broadband Overview and Education (BB-BRBND101, p. 63)
- Broadband Governance (BB-BRBNDGOV, p. 64)
- Broadband Planning (BB-BRBNDPLAN, p. 65)
- Broadband Engineering and Data Collection (BB-BRBNDLTE, p. 67)

OEC/ICTAP TA Request Submission and Acceptance

Each State /Territory may submit up to five individual TA requests each fiscal year. The OEC TA Branch puts out an electronic "data call" to SWICs for submissions several weeks before the start of a new fiscal year. OEC Regional Coordinators also participate in contacting Statewide Interoperability Coordinator (SWIC) and stakeholders about technical assistance needs. TA requests should be coordinated through the SWIC, who completes the submission in accordance with Sate procedures and submits them through the 'Public Safety Technical Assistance Tools' website at: www.publicsafetytools.info

The following are typical steps in the TA submission/acceptance/deferral process:

- Requestors access the TA Catalog and request form at Public Safety Tools by clicking on the 'TA Request' icon under the 'Resources Tab'.

- OEC reviews all TA requests in a "rolling process" as funding becomes available.

- Requests are accepted or deferred based on available resources and dates. While some requests will be accepted, others may be deferred.

- OEC makes every effort to ensure each State/territory receives some level of technical assistance based on its needs and requests.

- Once OEC accepts a TA request and notifies the SWIC, OEC/ICTAP contacts the SWIC and/or point of contact for a scoping call for the accepted service offering(s).

- Upon completion of the TA engagement, OEC/ICTAP will request feedback via an on-line TA evaluation form.

SWICs may submit fewer than five requests at the outset of a new fiscal year and submit the remainder later. However, submitting all five helps OEC assess its overall workload and plan for resources during the fiscal year.

OEC handles requests from Federal agencies and Tribal nations for technical assistance through separate processes. OEC anticipates making an electronic TA request form for Federal agencies and Tribal Nations available in early CY 2014. More information about State requested technical assistance is below.

State Requested Technical Assistance

OEC issues a data call to all SWICs several weeks prior to the start of the new fiscal year. OEC TA Branch staff and Regional Coordinators are available to discuss TA requests with each SWIC and will work to ensure each State/Territory receives some level of OEC/ICTAP support. States/territories may request up to five TA offerings, which may all be submitted at the same time.

If an offering does not match an organization's specific requirement or as needed, OEC/ICTAP encourages SWICs to work with OEC/ICTAP to customize the offering to meet their needs. Most service offerings may be combined or tailored to address the needs of the requesting organization. COMU-related courses have a core curriculum which must be taught intact. Any modifications to that core curriculum, that the State would like to have, will be considered during the logistics (scoping) call with the SWIC.

For example, if a stakeholder has a single project or initiative which requires TA from more than one Catalog offering, OEC/ICTAP can combine multiple offerings to enable the requesting organization to accomplish its goals. Similarly, if a requesting organization requires only a portion of the services offered, the TA offering can be scaled to address that specific need. Requestors are also encouraged to contact the TA Branch at any time via OEC@dhs.gov.

During FY2014, OEC/ICTAP will continue to support requests that relate to the build out of the NPSBN within their State or across regions and promote a TA offering that relates to OEC's multi-state preparedness and collaboration initiative. The on-line, interactive TA Request Form can be accessed at: www.publicsafetytools.info

Federal and Tribal Nation Technical Assistance

Federal and Tribal Nation partners may request TA offerings described in this catalog, such as gateway training, communications unit related offerings and exercise support.

For Federal partners, OEC offers a training seminar, "Federal Interoperable Communications Training," that focuses on interoperability between Federal partners, State, local and tribal public safety entities.

In addition, OEC/ICTAP can facilitate Federal and Tribal participation at State-requested workshops on a space available basis. Contact OEC at OEC@dhs.gov for additional information.

OEC/ICTAP provides interoperable communications support to Tribal Nations across the United States, including, for example, the Seminole Tribe, Pueblo of Acoma, and the Blackfeet of Montana, among others.

Governance

A formal governance structure is critical to the success of interoperability planning. Governance involves a common structure for solving interoperability issues through improvement of policies, processes, and procedures of any major project by enhancing communication, coordination, and cooperation; establishing guidelines and principles; and reducing any internal jurisdictional conflicts. Governance involves decision-making groups responsible for ongoing planning and implementation of interoperable communications initiatives.

OEC/ICTAP provides requestors assistance with reviewing and evaluating existing governance structures and providing recommendations for establishing new governance bodies or structures. OEC/ICTAP TA support for governance may be applied to governing bodies [for example, State Interoperability Executive Councils (SIECs), Statewide Interoperability Governance Boards (SIGBs)]; existing or to be developed documentation (working group charters); and communications-focused entities (statewide radio systems). Governance Support services include:

TA Catalog Item	Presentation	Deliverable(s)	Audience
GOV-ASMT: Assessment of Governance Structures	Site Assessment (Scope Dependent)	Final Assessment Report	SIEC/SIGB
GOV-COMUPLAN: Development of COMU Planning and Policies	Workshop (1 Day)	Draft Plan/Assessment Matrix	Mid-Senior Level Managers
GOV-DOC: Development of Governance Documentation	Workshop (1 Day)	Populated Governance Template /Workshop Materials	Mid-Senior Level Managers
GOV-GSM: Review of Governance Structure Models	Seminar (1.5 Days)	Document Models/Templates	Public Safety Stakeholders
GOV-PLAN: Follow-up Statewide Planning Workshop	Workshop (1-2 Days)	Planning Documents/Materials	SWIC/SIEC/COML/PSCC
GOV-PRJMGMT: Public Safety Communications Project Management	Seminar (1 Day)	Communications Project Management Tools	Project Managers

GOV-ASMT: Assessment of Governance Structures

Description

This offering provides a comprehensive assessment of the organizations, structures, and other decision-making bodies in place or to be developed that are tied to interoperable communications in the requesting jurisdiction. OEC/ICTAP provides a report with recommendations about the current governance environment or structure intended to improve or enhance the oversight of interoperable communications activities in the jurisdiction. This offering is usually conducted off-site through a OEC/ICTAP review of existing governance documentation.

This assessment includes identification of the governance bodies (for example, SIECs, SIGBs, or councils that oversee communications systems), their composition, organizational structure, roles, and responsibilities, establishment and scope of authority, interrelationship with other governance groups in the same jurisdiction or geographic area, and review of related documentation such as memoranda of understanding (MOUs), charters, agreements, by-laws, etc.

Areas of overlap, duplication, or potential for confusion over authority, roles, and responsibilities are identified, along with suggested actions to resolve such issues.

Deliverables

- Final assessment report
- May be accomplished by Webinar

OEC/ICTAP assists requestors with development of governance documentation and provides workshops, which can be customized to meet the stakeholders' goals and objectives.

GOV-COMUPLAN: COMU Planning and Policies

Description

This one-day workshop provides attendees with tools and best practices to develop a strategic plan to implement State/Territory, local and regional level initiatives to improve policies and procedures for managing on-going development of ICS Communications Unit (COMU) personnel and Communications Unit assets.

More than 7,000 All Hazards ICS Communications Unit personnel have been trained, and every State/Territory now has a pool of COMLs and COMTs; however, not every State has a Program with policies and procedures to track, maintain and utilize ICS Communications Unit (COMU) resources. This offering is aimed at mid to senior level managers across all public safety disciplines to increase awareness and understanding of the COMU functions and develop a strategic plan to improve utilization and management of personnel and equipment. The offering can be customized to include tracking and managing AUXCOMM trainees if a State wishes.

Objectives of the strategic plan include; maintaining an inventory of Communications Unit assets, training and exercise opportunities that support completion of the COML and COMT Position Task Books (PTBs), and deploying COMU assets during all- hazards situations.

Topics covered include:
- Current practices and standards for COML, COMT recognition or certification
- Development of vision, mission and guiding principles for a COMU Program Strategic Plan
- Methods to track and report Communications Unit assets
- Opportunities to provide training and exercises that develops trainee qualifications and PTB completion
- Deployment procedures and policies for COMU assets
- Key performance measures of a COMU program

This offering complements: TRG-COML, TRG-COMT, TRG-AUXCOMM, OP-COMLEX, and OP-COMMEX.

Deliverables
- Workshop and presentation materials
- Draft ICS Communications Unit Strategic Plan
- ICS Communications Unit Assessment and Development Matrix

GOV-DOC: Development of Governance Documentation

Description

This one-day workshop provides assistance with developing new governance documents in order to provide constructive feedback and identify opportunities for enhancement that could lead to more effective communications interoperability planning, activities, and operations. This offering also provides a review of current processes for developing, revising, and storing governance documents, and recommendations for improvements.

There is a wide variety of documents that are associated with governance. These include formal statutory, legislative, or executive orders establishing governance structure and bodies. Other examples include by-laws, charters, Memorandum of Understanding (MOU), mutual aid agreements (MAA), and various other types of agreements. Participants are provided with templates and samples for developing formal charters, MOUs, MAAs, frequency/radio system sharing agreements, or other agreements for governance groups. OEC/ICTAP staff will also discuss lessons learned and methods and models used for communications interoperability governance used by communities across the country.

Templates and samples for all document models include definitions of the purpose, authority, scope, operating principles, membership, decision-making processes, and expected outcomes. Recommendations are provided for the structuring of the various types of documents, questions, and issues to address when generating content for each of the document sections. OEC/ICTAP data specialists can help the requester populate governance document templates during the workshop.

Deliverables
- Workshop and presentation materials
- Document models and templates
- Populated document drafts
- Report on governance document and processes

GOV-GSM: Review of Governance Structure Models

Description

This offering provides models for the development of structures, strategies, and decision-making systems, and support to committees, and/or working groups responsible for the ongoing planning and implementation of interoperable communications initiatives. This seminar is typically a one and a half to two day engagement that brings together mid and senior level public safety managers whose responsibilities involve interoperable emergency communications.

This OEC/ICTAP seminar addresses the characteristics of successful governance models, organizational structures, and models for effective charters, and/or bylaws; provides examples of governance roles and responsibilities; and discusses performance measures. Seminar attendees discuss and develop recommendations for governance structures covering a specific geographical area and applicable jurisdictions.

Seminar participants discuss processes for identifying and including all relevant stakeholders. OEC/ICTAP facilitators provide definitions and examples of roles, responsibilities, and relationships of effective governance groups. Recommendations are provided for the development of a strategic action plan by which goals and objectives are achieved, potential challenges are identified, and a mechanism is developed to regularly evaluate progress and effectiveness of planning efforts.

Deliverables
- On-site seminar and presentation materials
- Document models and templates

GOV-PLAN: Follow-up Statewide Planning Workshop

Description

This service offering is for requestors who desire further assistance in developing plans for specific initiatives and challenges identified in Statewide Communications Interoperability Plans (SCIP), beyond the scope of workshops OEC offers on a rotating basis. Depending on the requestor's focus, this workshop lasts one to two days. The planning for initiatives beyond those of an annual SCIP workshop includes development of industry-standard project plan(s) for various initiatives, establishment of milestones, and work breakdown activities. While this workshop focuses on initiatives and challenges in an individual State/Territory's SCIP, it also complements and provides a planning foundation for a Strategic Communications Migration Plan (SCMP)

Prior to the workshop, OEC will contact the SWIC/SCIP point of contact (POC) to discuss the specific initiatives, challenges and priorities on which OEC/ICTAP staff should focus. This will enable OEC/ICTAP to provide an interdisciplinary team of staff during the workshop, for example, with experience as needed in RF engineering, planning, and operations to collaborate on site with the requestor's team.

At a minimum, workshop attendees should represent the SIGB or SIEC and other communications, planning, and operations personnel from multiple area agencies and jurisdictions across all public safety/service disciplines, including tribal, non-governmental organizations, and volunteer entities. Suggested participants would include, but are not limited to:

- SWIC and SCIP POC
- SIGB or SIEC members
- Law enforcement, fire, and emergency medical services (EMS) communication specialists, incident management staff and practitioners
- Agency planners and funding coordinators (for example, State Administrative Agency [SAA])
- Communications coordinators and supervisors
- Communications Unit Leaders (COML), radio operators, technical specialists
- Public safety communications center (PSCC) managers

Deliverables
- Workshop and presentation materials
- Additional deliverables (depending on focus)

GOV-PRJMGMT: Public Safety Communications Project Management

Description

This service offering is designed in recognition of the fact that often in the public safety arena, project managers who have not had prior experience in managing such efforts may be assigned to LMR interoperability and technology projects. Public safety communications projects tend to be very expensive, of long duration and are resource-intensive. They frequently involve operational and policy areas that go well beyond the technology aspects of upgrading or implementing new radio systems. There are elements of public safety communications projects that need to be considered when using industry-standard project management practices, including, for example, the role of reliable, secure communications and the 24/7 nature of public safety work as well as the sensitive nature of public safety data over radio systems.

If desired, OEC/ICTAP staff will work with SWICs in the design of this seminar to ensure focus on issues of concern to State and local government officials and senior departmental policy makers.

Topics covered include:

- Project governance
- Project scheduling
- Risk management
- Project budgets
- Project implementation

OEC/ICTAP provides project management guidance and tools for completing communications and interoperability projects.

As part of this seminar, participants receive project management tools they can implement in their own communications and interoperability projects.

This offering may be customized for senior elected and appointed officials and for executive sponsors with a one to two hour overview at the beginning of the seminar. This offering may also be customized for a second day of actual plan writing for a communications-specific project. This will be arranged when OEC/ICTAP staff scope the workshop with the requester. During a second day attendees who want to prepare specific work products such as project charters and risk management plans should be prepared with notes, references, and background materials for the project about which they desire to create project planning work products. Examples of communications-focused project plans could include:

- Dispatch center consolidations
- NG-9-1-1 technology insertions or migrations

Deliverables
- Presentation materials
- Reference materials
- Communications project management tool

Standard Operating Procedures (SOP) and Communications Support

S tandard Operating Procedures (SOPs) are formal written guidelines or instructions that usually contain both operational and technical components. In many cases, SOPs are designed to facilitate cross-discipline and cross-jurisdictional operations on a day-to-day or emergency basis. Clearly defined interoperable communications SOPs facilitate an orderly and efficient response to multi-agency incidents and events as routine as daily calls for service and as catastrophic as large scale disasters. In addition to SOPs, various State/Territory, urban area, regional, and/or tribal planning documents include specific communications components.

Standard Operating Procedure (SOP) documentation in which communications play a role include:

- Emergency Operations Plans (EOP)
- EOP Communications Annexes/Annex K (Annex K is the primary document for publishing communications system guidance)
- Emergency Support Function (ESF) #2, Communications
- Continuity of Government (COG) and Continuity of Operations (COOP) Plans
- Capabilities assessment planning
- Tactical Interoperable Communications Plan (TICP)
- Public Safety Communications Center (PSCC) Plans

SOP services include:

TA Catalog Item	Presentation	Deliverable(s)	Audience
SOP-ASMT: Assessment of Standing Operating Procedures/Communications Plans	Site Assessment (Scope Dependent)	Assessment Report	Public Safety Stakeholders
SOP-COOP: Continuity of Operations Planning	Workshop (1 Day)	Draft Coop Plan	Mid-Senior Level Managers
SOP-DEV: Development of Standard Operating Procedures/Communications Plans	Workshop (1 Day)	Draft SOPs	Mid-Senior Level Managers

SOP-ASMT: Assessment of Standard Operating Procedure (SOP)/Communications Plans

Description

This service offering provides an independent third-party assessment of existing or proposed SOPs or Communications Plans. OEC/ICTAP provides an interdisciplinary team of staff who evaluate the procedures or plans. Results of the SOP/Communications Plan Assessment are detailed in a report which documents strengths, concerns, and areas for improvement. The assessment report also includes recommendations designed to resolve identified gaps, improve the applicability and functionality of the procedures/plans, and enhance regional interoperable communications response capabilities.

Topics in this assessment may include key elements such as:
- Operational applicability
- Scope and authority
- Content and format
- Participating agencies
- Compliance with NIMS
- Compatibility with other Federal, State/Territory, tribal, regional, and/or local procedures/plans
- SOP approval mechanisms
- Responsibility and process for maintenance and update of the Plan
- Training requirements
- Dissemination process

State/Territory, tribal, regional, and urban area public safety entities may request SOP/Communications Plan Assessment Reports in various forms, based on their needs. The content and depth of the deliverables are determined by user needs and will be tailored to the requirements of each individual request.

Deliverable
- Assessment report

SOP-COOP: Public Safety Communications Centers' Continuity of Operations Plan

Description

The core mission of a Public Safety Communications Center (PSCC), both public safety answering points and dispatch centers, is to serve as the community's point of access to public safety resources and as a resource to first responders. PSCCs provide communications links, information, and additional resources. How are these critical processes maintained in the event of a catastrophic event within the PSCC? PSCC policies and directives should address emergency continuity of operations planning

OEC/ICTAP's COOP workshops provide public safety communications personnel guidance for preparing and implementing a COOP for their facilities.

(COOP) in preparation for all hazards events and other circumstances that affect their facility. COOP ensures continuity of essential functions across a wide range of emergencies and events. PSCCs have a responsibility to provide uninterrupted essential services to the public, regardless of circumstances. The length of this workshop can be tailored to meet the site's requirements.

This workshop provides an overview of the following COOP requirements and objectives for Communications Centers:

- Ensuring continued performance of essential functions during a COOP event.
- Reducing or mitigating disruptions to operations.
- Maintaining an alternate PSCC.
- Protecting essential assets.
- Ensuring succession to office of key leaders.
- Achieving a timely recovery and reconstitution.
- Maintaining a test, training and exercise program.

This offering complements OP-PSCC, SOP-DEV and SOP-ASMT

Deliverable
- Draft COOP Plan

SOP-DEV: Development of Standard Operating Procedure/Communications Plans

Description

SOPs facilitate an orderly and efficient response to events ranging from routine incidents like traffic accidents and house fires to catastrophic events ranging from an active shooter near public venues to catastrophic natural disasters that occur with little or no warning.

SOPs detail regular recurring work to help ensure the process is completed correctly, minimize variability and promote quality. SOPs provide assurance that work is completed consistently. SOPs are vital to ensure tasks are completed in the same way over time and should be, current, clear, concise and written in plain language.

SOPs also set guidelines to accomplish common tasks and employ equipment. SOPs are formal written guidelines or instructions that usually contain both operational and technical components. In many cases, SOPs are designed to facilitate cross-discipline and cross-jurisdiction operations on a day-to-day or emergency basis.

OEC/ICTAP presents participants in SOP workshops with examples, models, and templates used for creating various types of SOPs.

Other topics discussed during an SOP workshop include:

- Authority
- Agencies/jurisdictions covered by the SOP
- Content and format
- Compliance with NIMS
- SOP approval process
- SOP dissemination, training requirements
- Frequency of usage
- Ongoing maintenance and update process
- Any other elements unique to the target jurisdiction(s)

States/Territories, tribes, regions, regional entities, and urban area public safety entities may develop various types of SOPs during the workshop based on their individual needs. OEC/ICTAP also works with participants to minimize conflict with other existing SOPs at the Federal, State/Territory, tribal, regional, and/or local levels. The final deliverable is tailored to meet the requirements of each individual request.

Deliverables

- Document models and templates
- Populated SOPs and/or Plans

SOPs are critical to orderly and efficient day-to-day operations and especially when facilitating multi-agency responses during catastrophic events.

Communications Unit Training and Support

T he Communications Unit Training provided by OEC/ICTAP offers a path from high-level non-technical awareness to professional levels. These graduated levels begin with orientation and progress through awareness, operational, supervision, management, and executive applications. These service offerings are presented in the framework of the National Incident Management System (NIMS) Incident Command System (ICS). States/Territories, tribal, regional, and urban area requestors are welcome to invite Federal partners at the field level to participate if room is available. Communications Unit Training and Support services include:

TA Catalog Item	Prerequisites	Duration	Deliverable(s)	Audience
TRG-AUXCOMM: Auxiliary Communications Workshop	1, 6, 7 & 8	2 Days	Project Plans	Amateur Radio Operators
TRG-COML: All-Hazards Communications Unit Leader (COML) Course	1 & 3	3 Days	Student Workbook	Emergency Response Professionals
TRG-COML TTT: All-Hazards COML Train-The-Trainer Course	1, 3, 4, 5 & 9	3 Days	Student Workbook	Qualified COMLs
TRG-COMT: All-Hazards Communications Unit Technician (COMT) Course	1,3* & 7	5 Days	Student Workbook	Emergency Response Professionals
TRG-COMT TTT: All-Hazards COMT Train-The-Trainer Course	1, 2, 3, 4 , 5 & 10	5 Days	Student Workbook	Qualified COMTs
TRG-ICS: Communications Unit Integration into NIMS ICS	N/A	1 Day	Workshop Materials	Emergency Response Professionals
TRG-INT: Principles of Interoperability and the National Interoperability Field Operations Guide (NIFOG)	N/A	1 Day	NIFOG Materials	Emergency Response Professionals
TRG-INTRADIO: Introduction to Interoperable Radio Operations	N/A	1 Day	Seminar Materials	Public Safety Personnel

Recommended

Course Prerequisites for COMU Offerings:	
1.	Completion of IS-100, IS-200, IS-700 and IS-800
2.	Completion of IS-265 (Basic Instructional Skills)
3.	Completion of ICS-300 (Intermediate ICS for Expanding Incidents)
4.	Completion of ICS-400 (Advanced ICS for Command and General Staff)
5.	Completion of IS-701.a (National Incident Management System)
6.	An FCC Amateur Radio License
7.	Past Experience in Emergency Communications
8.	Desire to work with COMLs in a NIMS/ICS environment
9.	Completion of the COML Position Task Book (attach a signed copy of the verification page)
10.	Completion of the COMT Position Task Book (attach a signed copy of the verification page)

TRG-AUXCOMM: Auxiliary Communications Workshop

Description

This class is designed for those auxiliary emergency communicators and groups who volunteer to provide backup emergency radio communications support to public safety agencies. Typically this includes amateur radio and Radio Emergency Associated Communications Team (REACT) communicators, but may include other volunteer emergency communicators.

Volunteer emergency communications operators/groups, using amateur radio, have been providing backup communications to public safety for nearly 100 years. Event planners, public safety officials, and emergency managers at all levels of government utilize their services. Often, amateur radio services have been used when other forms of communications have failed or have been disrupted. Today nearly all the States/Territories have incorporated some level of participation by amateur radio auxiliary communication operators into their TICPs and SCIPs.

This course focuses on auxiliary communications interoperability, the relationship between the COML and the volunteer, emergency operations center (EOC) etiquette, on-the-air etiquette, FCC rules and regulations, auxiliary communications training and planning, and emergency communications deployment. It is intended to supplement and standardize an operator's experience and knowledge of emergency amateur radio communications in a public safety context.

Prerequisites for attendance are:

- Completion of IS-100, IS-200, IS-700, and IS-800 prior to the workshop[1]
- An active FCC amateur radio license
- Past experience in auxiliary emergency communications
- A desire to work with COMLs in a NIMS/ICS environment

The SWIC will need to review copies of the attendees' documentation of prerequisites prior to the course date. At least seven days prior to the course start date, the SWIC (or their designated representative) will submit an email to OEC/ICTAP verifying the students have met the prerequisites and are eligible to participate in the course.

 It is a 20 hour, two-day course with facilitated lecture and student exercises. It can be scheduled during normal business days or weekends to accommodate participants' schedules. This course builds in time for interactive discussions and activities.

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[1] For any OEC/ICTAP COMU training course (COML, COMT, AUXCOMM) requestors are encouraged to notify the State Training Officer (STO) prior to its start to ensure the course is documented in state training files.

Because the content is NIMS-compliant, this offering is not modified for local circumstances. It is limited to 30 students. The course content includes:

- Introduction
- The Communications Unit and the EOC
- Auxiliary Emergency Communicator (AEC) Roles and Responsibilities
- Interoperable Communications
- Incident Communication
- Incident Radio Communications Plan (ICS Form 205)
- Incident Communications Center
- Team management and accountability
- Resources
- Intrastate and interstate radio networks
- Final exercise exam

Deliverables
- Workshop and presentation materials
- Written high-level project plan
- Outline(s) of project plan annexes

Auxiliary communications workshops provide emergency amateur radio volunteers an overview of the NIMS ICS structure and a greater understanding of how they can support COMLs.

TRG-COML: NIMS ICS All-Hazards Position-Specific Communications Unit Leader Course (E969)

Description

This service offering is designed for all State/Territory, tribal, regional, and local emergency response professionals and for support personnel with a communications background. It is designed to familiarize these professionals with the role and responsibilities of a COML under the NIMS ICS and to provide hands-on exercises that reinforce the lecture materials. OEC offers this course jointly with FEMA/EMI, as "E969, NIMS ICS All Hazards Communications Unit Leader."

Under the NIMS ICS structure, a COML is the focal point within the Communications Unit. This course provides DHS-approved and NIMS-compliant instruction to ensure that every State/Territory has trained personnel capable of coordinating on-scene emergency communications during a multi-jurisdictional response or planned event. OEC/ICTAP instructors are approved by DHS and have had extensive experience both as emergency responders and as COMLs.

The course is presented with facilitated lecture, hands-on activities, and extensive interactive discussions. OEC/ICTAP instructors work through the discussions and activities to explain in detail the processes used to achieve communication operability, interoperability, and how to incorporate additional communications solutions.

NIMS ICS All-Hazards Position-Specific training should be completed by personnel who are regularly assigned to functional, support, or unit leader positions or by those persons who desire to seek qualifications in those positions. They should have supervisory and personnel management skills and knowledge of local communications and communications systems. Additionally they must possess knowledge of the local topography, system site locations, and knowledge of the local, regional, and State Communications Plan/ contacts.

Prerequisites for attendance are:

- IS-100.b, Introduction to the ICS, ICS-100[2]
- IS-200.b, ICS for Single Resources and Initial Incidents
- ICS-300, Intermediate ICS for Expanding Incidents
- IS-700.a, National Incident Management System (NIMS), an Introduction
- IS-800.b, National Response Framework (NRF)

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[2] For any OEC/ICTAP COMU training course (COML, COMT, AUXCOMM) requestors are encouraged to notify the State Training Officer (STO) prior to its start to ensure the course is documented in state training files.

In addition, ICS-400, Advanced ICS, Command and General Staff-Complex Incidents, is recommended.

The SWIC will need to review copies of the attendees' documentation of prerequisites prior to the course date.   At least seven days prior to the start date, the SWIC (or their designated representative) will submit an email to OEC/ICTAP verifying the students have met the prerequisites and are eligible to participate in the course.   This course is three days long and is limited to 30 students.

Should the State, or other organization requesting this course, have additional prerequisites (in addition to the prerequisites listed above) for students attending this type of training, those additional prerequisites should also be completed, documented and verified prior to the students attending this course. At least seven days prior to the start date, the SWIC (or their designated representative) needs to submit an email to OEC, on behalf of the state, verifying the students that are registered for the class have met all prerequisites and are eligible to participate in the course.

All training material needed to teach this course will be provided by OEC. A logistical call will be held with the receiving organization once the TA is approved by OEC.

This course is three days long and is limited to 30 students.

Deliverables
- Workshop and presentation materials
- Student workbook and informational CD

COML training involves three days of classroom presentations and practical exercises.

TRG-COML TTT: NIMS ICS All-Hazards Position-Specific Communications Unit Leader Train-The-Trainer (E/L949)

Description

This service offering helps States/Territories create a self-sustaining COML training program by providing instructor training to individuals who have completed the Communications Leader training at the Unit Leader level. This course helps attendees develop essential core competencies required for teaching the COML course within their own State. The course supports learning through discussion, lecture, and participation in multiple activities providing a realistic, hands-on approach to mastering the skills of instructing the COML course.

NIMS ICS All-Hazards Position-Specific Train-The-Trainer (TTT) training should be completed by personnel who are assigned to function in a COML position. Participants must demonstrate a working knowledge of ICS and COML duties through experience and training and must be experienced in delivering adult education. Prerequisites for attendance are:

- Completed COML Position Task Book (PTB) (attach a copy with the appropriate signatures[3] of the PTB verification page to the FEMA Form 119-25-1, General Admissions Application)
- ICS-100, Introduction to the ICS
- ICS-200, ICS for Single Resources and Initial Action Incidents
- ICS-300, Intermediate ICS for Expanding Incidents
- ICS-400, Advanced ICS for Command and General Staff, Complex Incidents and MACS for Operational First Responders
- IS-700.a, National Incident Management System (NIMS), An Introduction
- IS-701.a, Multi-Agency Coordination System (MACS) Course
- IS-800.b, National Response Framework (NRF)

Students also must provide documentation of successful completion of formal adult education and/or training to include at least one of the following:
- Emergency Management Institute (EMI) Master Trainer Program
- National Fire Academy (NFA) Educational Methodology course
- National Wildfire Coordinating Group (NWCG) Facilitative Instructor (M-410) course
- Center for Domestic Preparedness (CDP) Instructor Training Certification Course Equivalents (for example, Total Army Instructor Training Course (TAITC); Small Group Instructor Training Course (SGITC); G265 Basic Instructional Skills course: etc.)
- State-certified Level II or higher Fire, Rescue, and/or EMS Instructor (NFPA 1041 – Level II)
- State-Certified Teaching Certificate
- Advanced degree in education, educational psychology, technical education, or a related program

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[3] For any OEC/ICTAP COMU training course (COML, COMT, AUXCOMM) requestors are encouraged to notify the State Training Officer (STO) prior to its start to ensure the course is documented in state training files.

In addition the following training is recommended: IS 265 Basic Instructional Skills; E/L449 Incident Command System (ICS) Curricula Train-The-Trainer (TTT).

The student trainer prerequisites for this TA are congruent with the accepted TTT requirements listed in FEMA's NIMS/ICS All-Hazards Position Specific Training Program Guidelines[4] for Incident Management Teams**.**

Should the State, or other organization requesting this course, have additional prerequisites, in addition to those listed above, should also be completed, documented and verified prior to the students attending this course. At least seven days prior to the start date, the SWIC, or their designated representative, will need to submit an email to OEC, on behalf of the state, verifying the students that are registered for the class have met all prerequisites and are eligible to participate in the course.

The receiving organization should bring their COML training kits to the class so the students can practice with the kits they will teach with in the field.

This course is three days long and is limited to nine students. All hands-on training hardware will be provided by OEC.

Deliverables

- Workshop and presentation materials
- Student workbook and informational CD

Train-The-Trainer courses enable jurisdictions to develop in-house trainers to provide COML and COMT training courses and expand their base of qualified COMU personnel.

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[4]   These prerequisites are congruent with the Train-The-Trainer requirements in FEMA's NIMs/ICS All-Hazards Position Specific Training Program Administrative Guidelines**.** Guidelines can be found at: www.training.fema.gov/AllHazards/PositionSpecificProgramGuidelines.doc

TRG-COMT: NIMS ICS All-Hazards Communications Unit Technician Course

Description

This class provides introductory and refresher training for the NIMS ICS COMT position. It introduces public safety professionals and support staff to various communications concepts and technologies including interoperable communications solutions, LMR communications, satellite, telephone, data, and computer technologies used in incident response and planned events. Participants develop the essential core competencies required for performing the duties of the COMT in an all-hazards incident, including responsibilities while operating in a local, regional, or State-level All-Hazards Incident Management Team.

The course is instructor-led and supports learning through discussion, lecture, participation in multiple activities, and hands-on lab work to explain processes used for establishment and operation of the technical communications resources for an incident or planned event. The course provides a realistic, hands-on approach to mastering the tasks and skills of a COMT.   It is designed for State/Territory, tribal, urban, and local emergency response professionals and support personnel in all disciplines who have a technical communications background.

This class is taught by OEC/ICTAP instructors who have both practitioner and Communications Unit experience. Prior to the on-site class, OEC/ ICTAP staff will work with the requesting site to incorporate communications technologies in use by the participants' agencies.

Attendees need to have technical communications background for this class.

Prerequisites for attendance are:

- A public safety background with experience in field operations
- Awareness of fundamental public safety communications technology
- Basic knowledge of local communications and communications system, frequencies and spectrum, technologies, local topography, system site locations including knowledge of local, regional, and State communication plans, and contacts
- Completion of IS-100b, IS-200b, IS-700a, and IS-800b[5]

In addition, ICS-300, Intermediate Incident Command System (ICS) for Expanding Incidents, is also recommended.

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[5] For any OEC/ICTAP COMU training course (COML, COMT, AUXCOMM) requestors are encouraged to notify the State Training Officer (STO) prior to its start to ensure the course is documented in state training files.

The SWIC will need to review copies of the attendees' documentation of prerequisites prior to the class date. At least seven days prior to the start date, the SWIC (or designated representative) will submit an email to OEC/ICTAP verifying the students have met all the prerequisites and are eligible to participate in the class.   This course is five days long and is limited to 15 students.

Any additional requirements that the State has to attend this course must also be completed, documented and verified prior to attending this course.

The SWIC, or their designated representative, will need to review copies of the attendees' documentation of prerequisites prior to the course date.   At least seven days prior to the start date, the SWIC (or their designated representative) will need to submit an email to OEC, on behalf of the state, verifying the students that registered for the class have met these prerequisites and are eligible to participate in the course.

A COMT flyaway case will be provided by OEC for this class. Should the state have its own flyaway equipment case, it is requested that they bring their case to supplement the hands-on portion of the class.

Deliverables
- Workshop and presentation materials
- Student workbook and informational CD

OEC/ICTAP's five-day COMT training course provides introductory and refresher training for communications technicians working in an ICS environment through classroom presentations and a series of hands-on exercises.

TRG-COMT TTT: Communications Unit Technician Train-The-Trainer Course

Description

This course helps attendees develop the core competencies required to teach the COMT course within their own States. The course is instructor-led training and supports learning through discussion, lecture, and participation in multiple activities. It provides a realistic, hands-on approach to mastering the skills of instructing the COMT course.

Participants must demonstrate a working knowledge of interoperable communications and ICS through experience and training and must be experienced in delivering adult education.

Prerequisites for attendance are:

- Qualified COMT (attach a signed copy of the verification page of the COMT Position Task Book to the course POC prior to the class)[6]
- Resume documenting significant experience as an instructor
- IS 265, Basic Instructional Skills
- IS 100, Introduction to the Incident Command System (ICS)
- IS 200b, ICS for Single Resources Initial Action Incidents
- ICS 300, Intermediate ICS for Expanding Incidents
- ICS 400, Advanced ICS, Command and General Staff-Complex Incidents
- IS-700.a, National Incident Management System (NIMS), An Introduction
- IS-701.a, Multi-Agency Coordination System (MACS) Course
- IS-800.b, National Response Framework (NRF)

Students also must provide documentation of successful completion of formal higher-level education and/or training to include at least one of the following (all are not required):
- Emergency Management Institute (EMI) Master Trainer Program
- National Fire Academy (NFA) Educational Methodology course
- National Wildfire Coordinating Group (NWCG) Facilitative Instructor (M-410) course
- Center for Domestic Preparedness (CDP) Instructor Training Certification Course
- Equivalents (for example, Total Army Instructor Training Course (TAITC); Small Group Instructor Training Course (SGITC); G265 Basic Instructional Skills course: etc.)
- State-certified Level II or higher Fire, Rescue, and/or EMS Instructor (NFPA 1041 – Level II)
- State-Certified Teaching Certificate
- Advanced degree in education, educational psychology, technical education, or a related program

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[6] For any OEC/ICTAP COMU training course (COML, COMT, AUXCOMM) requestors are encouraged to notify the State Training Officer (STO) prior to its start to ensure the course is documented in state training files.

In addition the following training is recommended: IS 265 Basic Instructional Skills; E/L449 Incident Command System (ICS) Curricula Train-The-Trainer (TTT).

The student trainer prerequisites for this TA are congruent with the accepted TTT requirements listed in FEMA's NIMs/ICS All-Hazards Position Specific Training Program Guidelines[7] for Incident Management Teams**.**

If a requesting state has additional prerequisites to attend this training, those must also be completed, documented and verified prior to attending this course.

The SWIC, or their designated representative, will need to review copies of the attendees' documentation of prerequisites prior to the course date. At least seven days prior to the start date, the SWIC (or their designated representative) will need to submit an email to OEC, on behalf of the state, verifying the students that registered for the class have met these prerequisites and are eligible to participate in the course.

The receiving organization should bring their COMT training kits to the class so the students can teach with the kits they plan on teaching with in the field.   A logistics call will be held with the receiving organization once the TA has been approved by OEC.

This course is five days long and is limited to nine students.

Deliverables

- Workshop and presentation materials
- Student workbook and informational CD

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[7] These prerequisites are congruent with the Train-The-Trainer requirements in FEMA's NIMs/ICS All-Hazards Position Specific Training Program Administrative Guidelines**.** Guidelines can be found at: www.training.fema.gov/AllHazards/PositionSpecificProgramGuidelines.doc

TRG-ICS: Communications Unit Integration into the National Incident Management System/Incident Command System Seminar

Description

The service offering focuses on addressing communications-specific needs during an operational period and on the requirements for the communications unit planning process for subsequent operational periods. This one day workshop is designed to give an overview of the ICS for emergency response and support personnel tasked with implementing the NIMS ICS principles, organization, and functions.

The seminar emphasizes establishing an organization that allows for interoperable communications among all levels of the organization. Participants progress through a simulated incident and engage in the command and general staff meeting (strategy meeting), tactics and plans meetings, develop an Incident Action Plan (IAP), and hand out the IAP while conducting an operational briefing. Participants assume command, general staff, and unit leader positions, and produce documentation required for each position. Participants develop an understanding for command, plans, operations, logistics, and administrative cycles for each primary management function.

Deliverables
- Seminar and presentation materials
- Document models and templates

TRG-ICS provides emergency response and support personnel with an overview of the NIMS Incident Command System (ICS) Structure.

TRG-INT: Principles of Interoperability and the NIFOG

Description

This service offering provides a one day seminar to familiarize participants with the basics of mobile radio technology rules affecting public safety for terrestrial, aviation, and maritime channels and explains how the NIFOG relates to interoperability, whether from a national, statewide, or regional perspective. It discusses the content and use of the NIFOG for response-level interoperable communications under different scenarios. It discusses national interoperability channels and offers assistance on how to incorporate those into planning for interoperable emergency communications at local levels.

First published by OEC in 2007, the NIFOG has become the authoritative guide about nationwide mutual aid/interoperability channels. The NIFOG contains:

- Regulations and guidelines for national interoperability
- Tables of nationwide interoperability channels
- Mutual aid and other common public safety channels
- Tables of commonly used frequencies
- Operational and technical reference information, such as dialing instructions for Government Emergency Telecommunications Service (GETS) and satellite phones

The NIFOG provides information about interoperable communications across different operational venues. In an evolving emergency, for example, it can be critical that radio specialists understand how to effect interoperability among users on disparate land, maritime, and aeronautical radio systems. The NIFOG also provides context for practitioners to understand the regulatory and operating constraints on interoperability channels. For example, it explains why non-Federal public safety personnel may not operate on Federal interoperability channels simply by invitation of a Federal first responder.

TRG-INT complements several other OEC/ICTAP offerings:

- TRG-INTRADIO: Introduction to Interoperable Radio Operations
- TRG-COML: All-Hazards Communications Unit Leader (COML) Course
- TRG-COMT: All-Hazards Communications Unit Technician (COMT) Course
- ENG-AG: Audio Gateway Information and Training

The NIFOG may be ordered on line at www.publicsafetytools.info and is provided to attendees of OEC/ICTAP-offered COML and COMT workshops.

Deliverables
- Briefing slides
- Reference documents
- Electronic copies of the NIFOG[8]

The TRG-INT workshop familiarizes attendees with the NIFOG and how it can be used to support response-level emergency interoperable communications.

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[8] See www.publicsafetytools.info

TRG-INTRADIO: Introduction to Interoperable Radio Operations

Description

This service offering is for professional and volunteer individuals who work in public safety but not directly in emergency communications. Individuals who will benefit from this workshop are those who may need a deeper understanding and some practical knowledge of interoperable radio communications. For example, fire fighters, law enforcement support personnel, and volunteer auxiliary emergency communicators, among others, will benefit from a better understanding about public safety interoperable and emergency communications.

Key topics include:
- Understanding of radio spectrum and how it is used in public safety
- Operational limitations of public safety voice and data communications
- Practical considerations about interoperable emergency communications
- Technical methods for establishing and maintaining interoperable communications during an incident or planned event
- Introduction to and hands-on familiarization with various vendors' subscriber and base station units
- NIMS ICS operational principles
- Emergency communications lessons learned from real-world incidents

The Introduction to Interoperable Radio Operations offering provides professionals and volunteers who work in public safety (but not directly in communications) an understanding of interoperable radio communications.

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This is a one-day seminar. The first half deals with general topics and basic skills. The second half is devoted to hands-on activities. This may include, in coordination with the host agency and attendees' needs, a tour of a PSCC or an Emergency Operations Center (EOC) to gain a better understanding of the interrelationship between dispatch functions or base station operations and everyday interoperable communications. Attendees who are volunteers must be sponsored by a public safety agency.

This service offering may be customized for senior public safety officials ranging from senior managers to emergency operations center personnel who are new to planning and implementing interoperable communications. The customized version focuses on the basic elements of interoperability, and to some extent operability, providing participants a baseline background and understanding of LMR interoperability and its relevant components in the public safety arena. It does not include hands on activities. It may be customized for specific audiences, such as county administrators, discipline-specific academy training personnel, and public safety agency management staff.

Deliverables
- Seminar and presentation materials
- Applicable subscriber and radio console "cheat sheets"

Communications Exercise and Operational Support

Exercises and operational assessments are important tools to assess, train for, and practice mitigation, prevention, response, and recovery capabilities. Often, however, communications is either omitted from or only notionally included in exercises or in operational assessments. To best approximate a real operational environment, exercises should thoroughly incorporate and evaluate available communications procedures, tools, and personnel in each multi-agency, multi-discipline, and multi-jurisdictional training/testing opportunity. OEC/ICTAP provides expertise in:

- Designing, conducting, and evaluating communications-focused public safety/service discussion-based and functional exercises
- Evaluating communications capabilities at full scale exercises
- Preparing communications-focused scenarios and injects for exercises
- Pre-planning for interoperable, emergency communications for special events
- Assessing on-site operational procedures relating to communications

States/Territories, tribes, regions, and urban areas should incorporate interoperable communications into exercises in order to:

- Promote an increased awareness of regional communications interoperability capabilities
- Identify areas for measurable improvement in interoperable communications elements (i.e., governance, standard operating procedures, technology, training and exercises, and usage)
- Achieve a shared understanding of existing communications interoperability strengths and gaps experienced by regional communication specialists, first responders, and public safety officials
- Build stronger relationships among regional public safety professionals, officials, and first responders that transcend agencies, jurisdictions, and disciplines

OEC's technical assistance for exercises is solely in support of the communications aspects of State/Territory or local exercises. This technical assistance may be requested separately or as an adjunct to other public safety exercises. OEC/ICTAP exercise support complies with DHS Exercise and Evaluation Program (HSEEP)[9] guidelines as the basis for developing exercises.

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[9] See www.hseep.dhs.gov

Requestors should note that OEC/ICTAP does not enter data about OP-COMLEX, OP-EXTTX, OP-FE, OP-FSE, or OP-TTX engagements into the DHS National Exercise Schedule System (NEXS).

Within OEC/ICTAP's service offerings for communications-focused exercises, OEC has helped stakeholders measure their current communications capabilities against the Target Capabilities List (TCL), Core Capabilities and the Emergency Support Function (ESF) annexes. This approach focuses on helping stakeholders measure and improve communications capabilities and performance.

In 2011, DHS released the first edition of the National Preparedness Goal in response to Presidential Policy Directive 8: National Preparedness (PPD-8). The National Preparedness Goal describes the Nation's security and resilience posture through Core Capabilities, an evolution from the TCL. The Core Capabilities address five mission areas: Prevention, Protection, Mitigation, Response, and Recovery. Each Core Capability includes preliminary targets, but the evaluation measures are still under development.

OEC supports discussion and operations-based exercises throughout the country with a focus on interoperable emergency communications challenges.

Until evaluation metrics for each Core Capability are available, OEC/ICTAP will continue to use measures adapted from the TCL to assess the following Core Capabilities and utilize new metrics for assessing Core Capabilities as they are released by FEMA:

- Operational Communications
- Operational Coordination
- Public Information and Warning

TA offerings within Communications Operations Support are categorized into the following services:

TA Catalog Item	Presentation	Deliverable(s)	Audience
OP-ASMT: Operational Communications Assessments	Site Assessment (1-3 Days)	Presentation	Public Safety Personnel
OP-BKUPCOM: Planning for Backup Communications Options	Workshop (1 Day)	Capabilities Assessment	Public Safety Personnel
OP-COMLEX: All-Hazards Communications Unit Leader Exercise	Exercise (2 Days)	Student Performance Report/AAR	COML Trainees
OP-COMMEX: All-Hazards Communications Unit Exercise	Exercise (2 Days)	Student Performance Report/AAR	COML & COMT Trainees
OP-EXDESIGN: Communications-Focused Exercise Design	Seminar (1 Day)	Exercise Tool Kit	Public Safety Personnel
OP-EXTTX: Communications-Focused Executive Tabletop Exercise	Exercise (1 Day)	AAR/IP	Public Safety Executives
OP-FE: Communications-Focused Functional Exercise	Exercise (1 Day)	AAR/IP	Public Safety Professionals
OP-FSE: Communications-Focused Full Scale Exercise	Exercise (1 Day)	AAR/IP	Exercise Planning Teams
OP-HANDHELD: Use of Handhelds "Just-in-Time" Training Program Development	Site Assessment (1-3 Days)	Operating Instructions/ Reference Card	Public Safety Agencies
OP-INCDNTAAR: Post-Incident After Action Report Development	Site Assessment (1-3 Days)	AAR/IP	Communications Specialists
OP-MCUS: Mobile Communications Unit Support	Scope Dependent	CONOPs, SOPs & Op Guides	MCU Managers
OP-PSCC: Public Safety Communications Center Operations Workshop	Seminar (1.5 Day)	Presentation	PSCC Supervisors & Managers
OP-SPEV: Communications-Focused Special Event/Pre-Event Planning Support	Scope Dependent	Scope Dependent	Public Safety Professionals
OP-STREMAC: Strategic Technology Reserve Emergency Management Assistance Compact	Scope Dependent	Scope Dependent	SWICs & State Officials
OP-TEPW: Communications-Focused Training and Exercise Plan Workshop	Workshop (2 Days)	Populated TEPW Draft	Public Safety Professionals
OP-TTX: Communications-Focused Tabletop Exercise	Exercise (1 Day)	AAR/IP	Public Safety Professionals

OP-ASMT: Operational Communications Assessments

Description

All operable and interoperable communications must be efficient and intuitive in order to be effective tools for public safety responders and communications specialists. Operational communications assessments, therefore, ensure that proposed or in-place technologies, plans, and procedures enhance and support operations.

These assessments are tailored directly to the requestor's individual needs and can include items such as:

- Field assessments through "ride-alongs" with responders
- Tactical/emergency applications of routine interoperable communications solutions (for example, shared channels for multi-agency vehicle pursuits, etc.)
- Tactical assessments of interoperable assets for specialty response teams
- OEC/ICTAP presents the results of each assessment through an Operational Assessment Report. The final deliverables are tailored to meet the requirements of each individual request.

Deliverable

- Operational assessment report

OP-BKUPCOM: Planning for Backup Communications Options

Description

Public safety communications systems are critical infrastructure, heavily relied on during day-to-day operations and with increased demand on them during large scale incidents or events. The potential for partial or complete failures or insufficient coverage or capacity during events needs to be addressed through a comprehensive pre-planning process. This workshop offers assistance with planning for various aspects of implementing backup communications solutions, including:

- Guidance about hardening existing systems to reduce chances for failure of
  - Site facilities
  - Emergency power options
  - Redundancy and/or connectivity
- Assessments of communications infrastructure to identify potential backup options, or additional coverage and capacity
- Assessments of Strategic Technology Reserve (STR) resources which could be deployed or pre-staged to provide backup options, or additional coverage and capacity
- Review of backup options to determine potential for sufficient capacity or coverage when activated
- Documenting backup options using ICS forms, SOPs, etc.
- Format for briefing on backup options during incident action planning meetings
- Developing planning criteria for specific scenarios incorporating amateur radio resources into backup and support options

Following the advance collection of the necessary data on infrastructure and available resources, OEC/ICTAP will provide an on-site workshop, which may be tailored as needed to meet the unique needs and environment of the requesting jurisdictions and agencies. The workshop may include breakout sessions, during which participants define specific challenges to continuity of communications within their area of operation and then brainstorm approaches to addressing them. OEC/ICTAP staff will provide real-world examples of plans and approaches to different aspects of backup communications solutions.

Deliverables

- Capabilities assessment templates
- Incident Action Planning sample documents
- Examples of backup options and documentation from other public safety agencies
- Draft SOPs

OP-COMLEX: All-Hazards Communications Unit Leader Exercise

Description

In this service offering an OEC/ICTAP instructor collaborates with public safety personnel from a State/Territory, region, or urban area to design, facilitate, and conduct a Communications Unit Leader Exercise (COMLEX). This service offering is a follow on to the Communications Unit Leader (COML) training course. Its focus is on helping COML trainees demonstrate skills and complete requirements in the Position Task Book (PTB).

Public safety professionals who have completed a COML course must complete a series of competency tasks in their PTB as the next step in becoming a recognized COML for their agency. In this one day exercise, tasks are designed to simulate those COMLs will encounter during an incident. At the end of the exercise locally recognized COMLs will sign off tasks within the PTB for trainees who have demonstrated their proficiency at completing task(s).   If the requesting jurisdiction does not have qualified COML, OEC/ICTAP will help the requestor identify qualified personnel to sign off the PTBs.

The OEC/ICTAP facilitator will coordinate with the requesting jurisdiction to identify an Exercise Planning Team (EPT). In advance of the COMLEX, OEC/ICTAP provides the requesting site with an Initial Planning Meetings (IPM), a Final Planning Meetings (FPM) that covers exercise planning and equipment needed to support the exercise. Just prior to the exercise, a virtual Go-To-Meeting will review the Master Scenario Events List (MSEL) and final exercise logistics with the EPT.

The exercise can accommodate nine COML trainees per day. The exercise can be repeated a second day to allow up to nine additional COML trainees to participate. At the completion of the exercise, the EPT will review the exercise results to determine which participants successfully completed the various PTB tasks, and it will make recommendations to help participants improve their performance.

Deliverables
- COMLEX information package
- Initial and final planning meetings
- Pre-exercise review of MSEL via Go-To-Meeting
- Exercise plan
- Controller/evaluator handbook
- Exercise evaluation guide (EEG)
- Student performance report/AAR

OP-COMMEX: Communications Unit Exercise

Description

In this service offering an OEC/ICTAP instructor collaborates with public safety personnel from a State/Territory, region, or urban area to design, facilitate, and conduct a Communications Unit Exercise (COMMEX). This service offering is a follow on to the Communications Unit Leader (COML) and Communications Unit Technician (COMT) training courses. It provides an opportunity for COML and COMT trainees to demonstrate proficiency and complete requirements in the respective Position Task Books (PTB). Public safety professionals who have completed a COML/COMT

The COMMEX offering provides an opportunity for COML and COMT trainees to complete their Position Task Book requirements in an exercise environment.

course must complete a series of competency tasks in their PTB as the next step in becoming a recognized COML/COMT for their agency. In this one day exercise, tasks are designed to simulate those COMLs and COMTs will encounter during an incident.

At the end of the exercise locally recognized COMLs / COMTs sign off tasks within the PTB for trainees who have successfully demonstrated their proficiency at completing the task(s). If the requesting jurisdiction does not have qualified COMLs/COMTs, OEC/ICTAP will help the requestor identify qualified personnel to sign off the PTBs.

The OEC/ICTAP facilitator will coordinate with the requesting jurisdiction to identify an Exercise Planning Team (EPT) to ensure that the exercise meets the goals and objectives of the requestor. Prior to the COMMEX, OEC/ICTAP provides the requesting site with an Initial Planning Meeting (IPM), a Final Planning Meeting (FPM) that covers exercise planning and equipment needed to support the exercise. OEC/ICTAP uses a virtual Go-To-Meeting will review the Master Scenario Events List (MSELs) and final exercise logistics with the EPT just before the exercise.

The exercise can accommodate six COML and six COMT trainees per day. The exercise can be repeated a second day to allow up to six additional COML and COMT trainees to participate. At the completion of the exercise, the EPT will review the results to determine which participants successfully completed the various PTB tasks, and it will make recommendations to help participants improve their performance.

Deliverables
- COMMEX information package
- Initial and final planning conferences
- Pre-exercise review of MSEL via Go-To-Meeting
- Exercise plan
- Controller/evaluator handbook
- Exercise evaluation guide (EEG)
- Student performance report/AAR

OP-EXDESIGN: Communications–Focused Exercise Design

Description

This service offering provides public safety communications and exercise design specialists an opportunity to learn how to incorporate communications into operations-based and discussion-based public safety exercises. The seminar stresses voice and data communications and discusses how best to build these components into exercises of all varieties. This seminar runs for one full day. All discussions are framed within the guidelines of the Homeland Security Exercise and Evaluation Program (HSEEP). This seminar will include lecture material and break-out work groups to address topics such as:

- Exercise components: communications "touch points" and drivers
- The exercise planning process: communications concerns
- The "how" of incorporating communications elements into exercises
- Key communications facets to exercises
- Including the "right" participants
- Developing ideal scenarios
- Developing After Action Reports/Improvement Plans (AARs/IPs)

This seminar can accommodate an audience of any size, subject to space and seating availability. It focuses on exercise design and planning personnel who are tasked with executing both operational and discussion-based exercises. Both public safety and public service agencies including law enforcement, fire, hospitals, public works, emergency medical services, etc. are welcome. Public safety communications personnel will gain a deeper perspective on exercise design and learn how to integrate communications objectives into both communications-focused and operational exercises. Exercise planners will gain insight into how voice and data communications affect exercise "play." Attendees should be familiar with public safety exercises in their jurisdictions and have roles in the planning and design of upcoming public safety exercises. Exercise design training such as HSEEP courses, FEMA on-line independent study courses[10] or the FEMA Master Exercise Practitioner (MEP) Program[11] are recommended but not required.

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10 IS-120.a An Introduction to Exercises www.training.fema.gov/EMIWeb/IS/IS120A.asp
    IS-130 Exercise Evaluation and Improvement Planning www.training.fema.gov/EMIWeb/IS/IS130.asp
    IS-139 Exercise Design www.training.fema.gov/EMIWeb/IS/is139.asp
11 Master Exercise Practitioner Program www.training.fema.gov/emiweb/emiopt.asp

Attendees will also receive an OEC/ICTAP exercise tool kit with exercise design aids including document templates, sample communications injects and topics for both operations-based and discussion-based exercises, etc.

Deliverables
- Seminar materials
- Exercise tool kit on CD
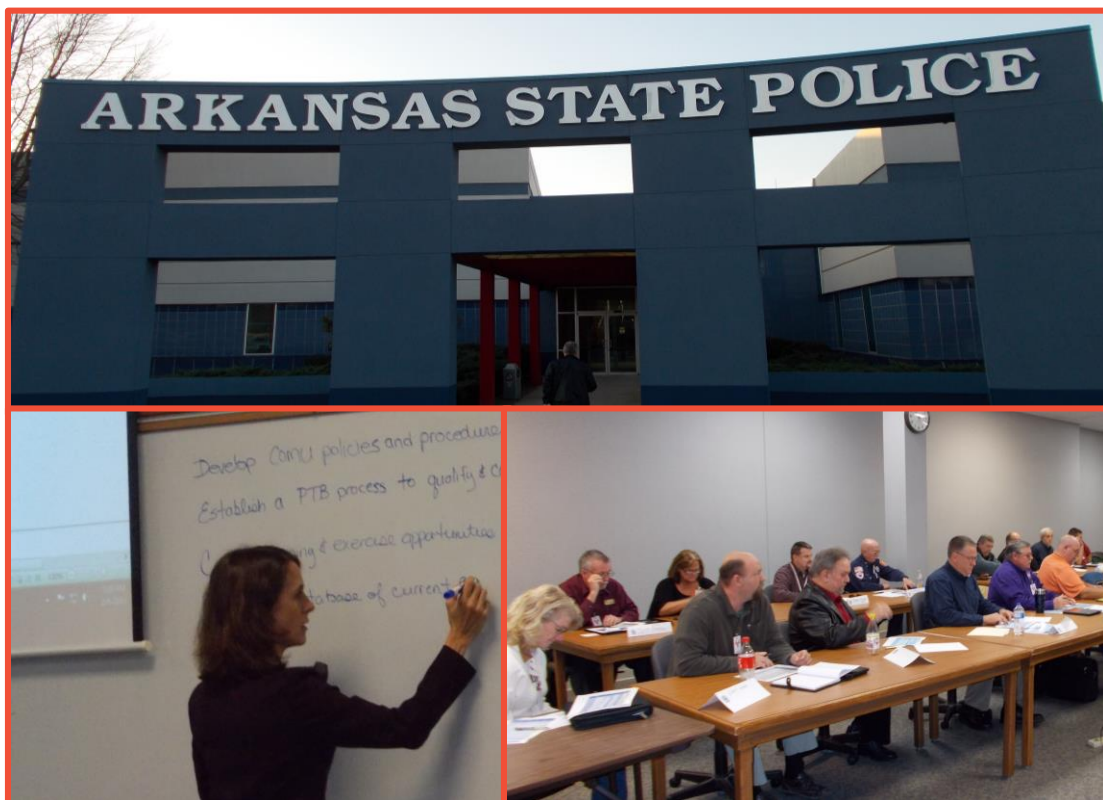
Incorporating communications into public safety exercises enables jurisdictions to be better prepared for a coordinated and efficient response when planned and unplanned events occur.

OP-EXTTX: Communications-Focused Executive Tabletop Exercise

Description

In this service offering, OEC/ICTAP staff collaborate with public safety executives and elected/appointed officials in a State/Territory, tribe, region, or urban area to design, facilitate, and evaluate a communications-focused EXTTX tailored to their specific needs. Large-scale incidents can result in long-term physical, economic, social, political, psychological, and environmental impacts on a region. To ensure effective response to, and recovery from, such an incident, senior public safety executives need an understanding of communications resources and training in order to coordinate a multi-agency response. The EXTTX is one day in duration preceded by two one day planning sessions that focus on ways to utilize interoperable "communications policies, procedures, and technologies to:

- Maintain command and control during incidents
- Enhance situational awareness
- Function effectively within the incident management process
- Provide policy inputs to the incident commander or unified command team
- Craft and deliver a cohesive incident message to the public

Together with the requesting region, OEC/ICTAP develops an Exercise Design Team (EDT) that includes a facilitator, data specialist, and evaluators as well as government officials, supervisory-level responders, and communications specialists from the requesting site. OEC/ICTAP members of the EDT are trained and experienced in conducting discussion-based exercises. OEC/ICTAP provides a checklist that covers required facilities, equipment, logistics, and other related issues. It is a one-day, on-site event with two one-day planning meetings.

OEC/ICTAP provides an After Action Report (AAR) /Improvement Plan (IP) which documents best practices, gaps, and recommendations to resolve those gaps.

Deliverables
- Initial and final planning meetings
- Logistics checklist
- Controller/evaluator/player situation manuals
- After action meeting presentation
- AAR/IP

OP-FE: Communications-Focused Functional Exercise

Description

This service offering provides an OEC/ICTAP Exercise Design Team (EDT) that collaborates with public safety professionals from the requesting area to design, facilitate, and evaluate a communications-focused Functional Exercise (FE). This exercise will comply with HSEEP guidelines and is aligned with ESF #2 (Communications).

Exercise participants demonstrate their ability to use regional communications assets in a large-scale incident scenario, but the movement of personnel and equipment is simulated. An FE is an excellent follow-on exercise to a TTX and a training lead-in to a Full Scale Exercise (FSE). It is a one-day, on-site event with three one-day planning sessions.

OEC/ICTAP develops an EDT of public safety communications personnel trained to identify successes and gaps revealed during the exercise. OEC provides controllers and evaluators for the exercise. The OEC/ICTAP EDT partners with the local Exercise Planning Team (EPT) to ensure the exercise is designed to meet the needs of the requestor.

OEC/ICTAP compiles the results of the FE through a written AAR/IP. The AAR/IP documents exercise best practices, gaps, and recommendations to resolve those gaps. If the FE follows an OEC/ICTAP Tabletop Exercise (TTX), the AAR/IP will also assess progress made on gaps identified during the TTX.

Deliverables
- Initial, mid and final planning meetings
- Logistics checklist
- Exercise plan (EXPLAN)
- MSEL
- AAR/IP
- After action presentation

OP-FSE: Communications-Focused Full-Scale Exercise

Description

This service offering helps a requestor plan for and assess interoperable emergency communications capabilities during execution of FSE. Although communication is one of several capabilities included in an exercise scenario, interoperable communications are frequently not an evaluation focus, and gaps in this area may be overlooked in exercise reports. FSEs are often large multi-agency, multi-discipline, multi-jurisdictional exercises designed to test many facets of emergency response and recovery operations. OEC/ICTAP staff will assist the local EPT in its planning and development of an annex to the documentation for the FSE to integrate interoperable communications into the exercise.

Delaware New Castle County Emergency Communications deployed their mobile communications vehicle during a training exercise.

OEC/ICTAP does not independently design or facilitate stand-alone communications-focused FSEs. However, OEC/ ICTAP staff can help ensure a local EPT considers all components of interoperable communications. This assistance can include tasks such as developing or enhancing exercise injects to trigger communications events and responses, incorporating applicable communications performance measures, identifying communications assets for exercise play, and documenting known communications challenges that could impact exercise play. OEC/ICTAP can also provide evaluators during the FSE who focus on assessing communications.

OEC/ICTAP provides evaluation results to the local EPT for incorporation into the exercise AAR, and will only comment on communications related issues within the confines of the FSE.

Deliverables
- Initial, mid and final planning meetings
- AAR/IP
- After action presentation

OP-HANDHELD: Use of Handheld Radios "Just-in-Time" Training Program Development

Description

This offering helps agencies set up programs to familiarize volunteers with public safety agencies' handheld radios.

This offering is based on a FEMA Lessons Learned Information Service (LLIS) notice, "Interoperable Communications: Handheld Radio Training Program for Volunteers," about "Just-in-Time" training on handheld radios for volunteers who assist response personnel during an incident. The notice found that volunteers needed training in the use, channels, and frequencies of the handheld radios that had been distributed to them, which contributed to inadequate situational awareness during responses.

OEC/ICTAP will provide assistance to agencies developing this type of training. It differs from the TRG-AUXCOMM offering in that auxiliary emergency communicators use their personal radio equipment to support public safety communications.

This workshop is designed to help emergency managers and communications personnel develop their own "Just-in-Time" training for volunteers who support first responders and use of agency-issued handhelds during incidents and emergencies including "quick-tip", check out, and instruction cards to affix to issued handhelds and using interoperability channels properly.

Deliverables
- Instructions for operating handhelds
- Volunteers checklist about usage
- SOP instructions for volunteers
- Operating Instructions/Reference Card

> *The FEMA LLIS notice discusses how Harris County, Texas, used its Tactical Interoperability Communications Plan (TICP) in the flow of critical information among response agencies during Hurricane Ike Operations. Lessons Learned Information Sharing (LLIS.gov) is the DHS/FEMA online network of lessons learned, best practices, and innovative ideas for the emergency response and homeland security communities.*
>
> *www.llis.dhs.gov/system/files*

OP-INCDNTAAR: Post-Incident After Action Report Development

Description

In this service offering, OEC/ICTAP staff help a site compile and review public safety communication lessons learned following a real-world incident or significant pre-planned event within a jurisdiction(s). This offering may be requested at any time and would not be part of the allotted five standard requests.

While jurisdictions typically compile after action reports (AARs) and improvement plans (IP) following significant public safety incidents/events, many do not have a formal AAR process or staff to document communications-specific best practices and lessons learned. Some agencies may have the resources to develop AARs/IPs for their internal use but may not routinely share those reports with other communications personnel involved in the incident/event. This offering can help a site's personnel learn from the communications successes and challenges experienced by their peers so they can leverage that knowledge and enhance interoperable emergency communication capabilities over a wide area.

In a one-day workshop, OEC/ICTAP staff collaborate with communication and operation specialists who supported the incident/event to gather incident information on various activities that include:

- Incident/event-wide use of various operable and/or interoperable technologies
- Use of a Communications Unit (COMU) to support the incident/event
- Communication support deployments (e.g., mobile towers, etc.)
- Private sector communication support (e.g., cellular on wheels, etc.)
- Communication degradation and/or failures
- Communication redundancies and the effectiveness of those redundancies
- Continuity of operation plans (COOP) for communications, if activated.
- Tactical communication plans, if utilized.

During the workshop, OEC/ICTAP staff will help the requestor compile a draft AAR/IP from this information that includes descriptions of successes and challenges from a communication perspective. The draft AAR will also include recommendations about any noted issues. OEC/ICTAP will review the draft AAR/IP with the site in a follow-up workshop or webinar where attendees can make corrections, changes, and additions and expand on the draft IP.

If requested, OEC/ICTAP will also assist with input and use of the Response Level Communications Tool for on-line, automated purposes (www.publicsafetytools.info). The draft AAR/IP is solely for the use of and distribution by the requesting agency(s).

Deliverable
- Incident data gathering workshop
- Final draft AAR/IP presentation workshop
- Draft AAR/IP for site use only

AARs identify areas for improvement that focus on key issues supporting the response effort during all hazards situations. This new OEC/ICTAP offering introduces a standardized format for AARs and helps requestors analyze communications challenges disclosed during unplanned events and incidents.

OP-MCUS: Mobile Communications Unit Support

Description

Mobile communications units (MCUs) and mobile command centers employ a wide range of communication resources. They range from smaller vehicles such as SUVs or trailers with basic LMR equipment to larger mobile communications centers with extensive voice and data systems and applications including satellite, video surveillance, weather monitoring, dispatching, and conferencing. Their names may vary from Mobile Communications Unit, Mobile Communications Center, to Mobile Command Center. MCUs are employed during a variety of situations such as emergency response incidents, small or large scale planned events, as well as for training or exercises.

This workshop is designed to improve the utilization, management, and operation of MCUs. OEC/ICTAP staff provide guidance on developing concept of operations (CONOPS) plans for the management and operation of mobile communication resources. In addition, OEC/ICTAP staff can review the policies and procedures for operation of MCUs, documentation and categorization of capabilities, SOPs for equipment operation, and training plans to keep Technical Specialists and Communications Unit Technicians proficient in MCU communications operations. The following options regarding capabilities assessments and specialized training are available:

- Inventory communications equipment and provide vehicle typing where appropriate
- Provide guidance on entering asset inventory into CASM or some other local database
- Provide operational and technical assessment of MCUs' communication resources and capabilities
- Provide guidance in the development of CONOPS for utilizing vehicle's communications capabilities in support of emergency incidents, planned events, training/exercises
- Assist with development of an SOP for deployment of the vehicle and use of its communication support systems
- Train personnel such as Technical Specialists (THSP) or Incident Communications Technicians on MCU's communications equipment, systems, and resources
- Train on vehicle deployment, setup, operation, troubleshooting, demobilization

This offering complements several other offering including OP-COMLEX, OP-FE and OP-FSE. Detailed SOP and CONOPS information developed under this service offering can also be incorporated into TICPs where available. The duration is dependent on the scope of the request.

Deliverables

- Inventory and assessment report of technical capabilities
- Draft CONOPS, SOPs, and Operator's Guides
- Documentation and diagrams/photos of MCU, its contents, and equipment capabilities
- Setup or operational guidance instruction

MCUs are vital emergency response assets during large scale emergencies and planned events. This OEC/ICTAP workshop offers guidance to enhance utilization of MCUs.

OP-PSCC: Public Safety Communications Center Operations Seminar

Description

This service offering is designed to help Public Safety Communications Center (PSCC) [both PSAPs and dispatch centers] supervisors and managers assess operations and readiness as they relate to call processing and interoperable communications capabilities. The offering also will involve and benefit law enforcement, fire, emergency medical services (EMS), and emergency management agencies utilizing PSCC services. It focuses on PSCC procedures to effectively process and disseminate information for public safety response and the capability to effectively establish interoperable or response-level emergency communications with other jurisdictions, disciplines, and agencies. It complements two other OEC/ICTAP offerings: SOP-COOP and ENG-NG9-1-1.

This one and a half day seminar will assist PSCC managers to assess their current operations and enhance their short and long-term planning initiatives. OEC/ICTAP staff will conduct the seminar and provide examples of best practices from throughout the Nation. During the seminar, participants from one or more PSCCs will discuss current PSCC operations for supporting incidents or events, whether from the normal PSCC facilities or from alternate locations, such as incident-based dispatch operations in the field. Operations personnel from law enforcement, fire, and EMS will also be encouraged to attend and to participate during the seminar, which are designed to provide an understanding of current PSCC operations issues and topics and their impact on interoperable and response-level emergency communications in the field.

Smooth, consistent communication center operations are key to ensuring the steady flow of information to responders during an event or incident.

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The OP-PSCC offering can assess and enhance:

- Current and long-term strategies for PSCC operations
- Tactical/incident-based dispatch policies and procedures
  - Developing policies/procedures for incident-based dispatch
  - Developing training program for incident-based dispatch
- Service-level agreements, PSCC management/governance structures
- Importance of Continuity of Operations Planning (COOP) and Telecommunicator Emergency Response Taskforce (TERT)[12] resources
- Procedures for integrating dispatch operations in various types of incidents and their relevance/relationship to NIMS/ICS guidelines
- Interoperable communications capabilities and resources managed or operated by the PSCC
- Training programs, best practices, and policies and procedures for deploying and demobilizing interoperable communications assets within and outside the PSCC environment
- Utilizing social media in the PSCC environment

It can be tailored to the requestor's specific requirements through the inclusion of drills on existing SOPs, technology, and procedures.

Deliverable
- On-site seminar including breakout activities

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[12] See www.njti-tert.org

OP-SPEV: Communications-Focused Special Event/Pre-Event Planning Support

Description

In this service offering OEC/ICTAP staff collaborate with public safety professionals in a State/Territory, tribal, regional, or urban area during the planning and execution phases of special events, disaster response, or other special public event with a high security.

Planned special events such as national/international sporting events, civic festivals, large conventions, or political summits can involve dozens of public safety agencies from multiple disciplines and jurisdictions. They typically present significant challenges to establishing and maintaining appropriate interoperable communications. Large-scale planned events, therefore, require substantial operational planning and preparation to coordinate all public safety participants, to ensure that the event proceeds smoothly, and to prepare to respond to one or more related incidents.

OEC/ICTAP staff provide a mix of skills (for example, operations, engineering, or policies and procedures) to ensure the planning team considers aspects of interoperable and emergency communications prior to or during the event.

OEC/ICTAP staff can work directly with the local event planners to provide inputs to event/incident action plans, assist with developing communications plans, identify pre-event training opportunities, and/or advise on methods to overcome identified communications challenges.

OEC/ICTAP has a large body of experience in supporting State and local interoperable communications efforts in conjunction with a National Special Security Event (NSSE) and other events of national-level interest and visibility. This offering can be tailored to bring lessons learned and best practices to requestors who are preparing for such events within their geographic areas of responsibility.

Deliverables

- Planning meeting inputs
- Event/incident action plan communications-focused inputs
- Communications plan inputs
- Other assessments, on request

OP-STREMAC: Strategic Technology Reserve Emergency Management Assistance Compact

Description

In 2012 SWICs in the Southeast asked OEC for assistance compiling a working, interactive inventory and analysis of communications assets available at State levels for deployment under EMACs. The concept behind the request was to support coordination and deployment of interoperable emergency communications throughout a ten State region (including Arkansas and Louisiana) with a readily available, up-to-date reference tool of strategic communications assets and personnel available at State levels for possible EMAC deployment on short notice.

One of the key focuses for this effort was to identify the availability of communications resources that could be requested through the EMAC process and to type those resources in terms of capabilities and characteristics.

This offering provides a forum and a centralized process for State-level officials involved in EMAC deployments to coordinate with counterparts in other States (neighboring only or Region-wide plus other States) on strategic reserve technologies and personnel potentially available during natural disasters or incidents.
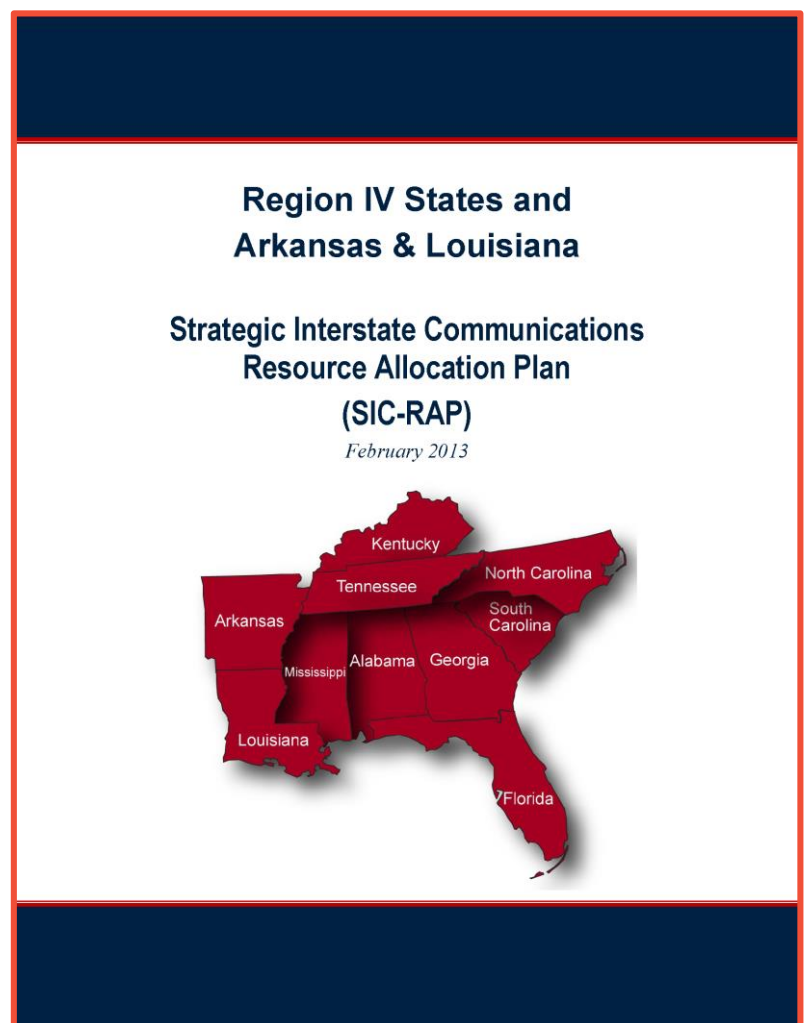
OEC/ICTAP developed the SIC-RAP for the FEMA Region IV States, plus Arkansas and Louisiana, as a reference for mutual aid responses throughout the Region during large scale events.

Elements that may be documented in the plan include:

- EOC Contact information
- Radio caches
- Gateways
- Portable/tactical repeaters
- Mobile communications units/vehicles
- Transportable radio systems
- Transportable towers
- Satellite phone equipment/caches

- Cellular phone equipment/caches
- Satellite and cellular data resources
- Video teleconferencing systems
- IP Based phone systems
- Communication Unit Personnel
- Other Communication elements as requested by the State/Region

OEC/ICTAP staff will also help State officials on processes and techniques for easily maintaining this kind of data and how the resulting tool can be cross- referenced and maintained in Communications Plans, SOPs and other references. In addition, OEC/ICTAP will discuss how SWICs can use this reference in their support of elected/appointed officials.

Deliverable
- Multistate EMAC STR Report and Inventory

OP-TEPW: Communications-Focused Training and Exercise Plan Workshop

Description

A communications-focused TEPW provides a requestor an opportunity to translate State/Territory, local, regional, and tribal goals and priorities into specific training and exercise objectives. The TEPW complies with HSEEP guidelines and compliments an area's overall training and exercise plan, if already developed.

A communications-focused TEPW helps to:

- Coordinate all communications-related training and exercise activities throughout the region across Federal, State, and local agencies
- Minimize duplication of effort and ensure resources are not over-extended
- Maximize the effectiveness of training and exercise funding allocations
- Present opportunities for various jurisdictions and agencies to fulfill multiple grant requirements for interoperable communications with a single exercise or training course
- Provide SWICs with a coordination mechanism with State Training Officers

A completed TEPW prioritizes communications training and exercise needs for the area and helps align them with Federal and State guidance. This aids requestors in defining the alignment between their and national or State priorities in order to streamline funding and support requests. The TEPW also focuses on aligning a requestor's training and exercise priorities with outcomes noted in previous AARs and IPs and leveraging results of past exercises. OEC/ICTAP delivers a two-day workshop which develops the TEPW based on an assessment of regional training and exercise needs.

The first day is a data gathering session focused on:

- Reviewing communications progress and accomplishments to date
- Consolidating known communications gaps
- Reviewing public safety/service communications training and exercise needs in light of regional or State homeland security strategy
- Identifying needs not associated with known training and/or exercise offerings
- Documenting future training and exercise offerings/opportunities
- Identify communications and training needs

During the second day, an OEC/ICTAP data specialist will populate the template with the information from the first half of the workshop. The second day focuses on incorporating that information into a regional plan. OEC/ICTAP facilitators may provide, as appropriate, examples from other regions nationwide to help participants apply best practices and lessons learned to situations similar to their own. The most successful TEPWs are based on strong, diverse representation from all disciplines, jurisdictions, and agencies across a region. The requesting site's attendees should include communications and operational personnel from multiple agencies and jurisdictions across all public safety/service disciplines, including non-governmental organizations, volunteers, and tribal entities in the area.

Deliverables
- Workshop presentation materials
- Document models and templates
- Populated TEPW draft

Carefully designed communications injects for exercises enable jurisdictions to identify gaps in their current training and exercise programs.

OP-TTX: Communications-Focused Tabletop Exercise

Description

In this service offering OEC/ICTAP staff collaborate with public safety and public service professionals from a State/Territory, tribe, region, or urban area to design, facilitate, and evaluate a communications-focused tabletop exercise (TTX). This exercise will follow the HSEEP guidelines and is aligned with ESF #2 (Communications) and the DHS guidance on capabilities.

TTX is a discussion-based, one day event with two one-day planning meetings. It is designed to find gaps in communications plans, policies, procedures, and communications systems needed to prevent, respond to, and recover from an emergency incident scenario.

The TTX provides an opportunity for responders, supervisors, and communications specialists to discuss communications plans, assets, and personnel in a static environment. Players review and discuss their ability to use regional communications assets in response to a large-scale incident scenario, but the movement of personnel and equipment is simulated. A TTX is an excellent means for initiating multi-agency exercise relationships or reviewing regional policies or procedures such as a TICP. It should precede both functional and full-scale exercises.

OEC/ICTAP provides the requesting State/Territory, tribe, region, or urban area an EDT including a facilitator, data specialist, and evaluators. This team partners with the local EPT to ensure the TTX meets the specific needs of the requestor. The OEC/ICTAP EDT also provides a logistics checklist that covers facilities, equipment, and other related issues.

OEC/ICTAP briefs the results of the TTX through a QuickLook presentation followed by a detailed, written AAR/IP. This AAR/IP documents best practices and gaps and makes recommendations to resolve gaps. OEC/ICTAP provides the site with a tabletop exercise manual.

Deliverables
- Initial and final planning meetings
- Logistics package (invitations, checklists, etc.)
- Situation Manual (SITMAN)
- Exercise presentations and briefings
- Tabletop exercise manual
- QuickLook presentation
- After action presentation
- AAR/IP

Broadband Support to NPSBN/FirstNet

With passage of the Middle Class Tax Relief and Job Creation Act of 2012 and its provisions to fund and govern a Nationwide Public Safety Broadband Network (NPSBN), public safety have the promise for a secure, reliable, and dedicated nationwide interoperable digital network for emergency responders.   This Act established the First Responder Network Authority, or FirstNet, within the Department of Commerce's National Telecommunications and Information Administration (NTIA) to oversee network planning, construction, and operation. FirstNet members were announced in August 2012 and have begun their consultation process with States and territories through a series of regional and state workshops.   In addition, NTIA established a State and Local Implementation Grant Program (SLIGP) to assist State, regional, tribal, and local jurisdictions with identifying, planning, and implementing the most efficient and effective means to use and integrate the infrastructure, equipment, and other architecture associated with the NPSBN. Up to $135 million has been made available to NTIA for the program.

DHS, through OEC, is assisting States with preparation and planning for deployment of the NPSBN. OEC/ICTAP assists stakeholders with an understanding of broadband technology and early planning for its use in public safety operations and supports States in incorporating broadband planning into their Statewide Communication Interoperability Plans (SCIPs), as well as assisting with data collection through specialized tools.   While these OEC offerings are being closely coordinated with both SLIGP and FirstNet, there are no requirements to use OEC support.   *(SLIGP grantees should consult with NTIA before including State/local participation in an OEC TA workshop as an SLIGP expense or in-kind match).*

Service offerings in this category will assist State/Territory, tribal, regional, and urban areas in understanding public safety broadband technology and support their planning for participation in the NPSBN. Since OEC introduced the first ENG-BRBND technical assistance offering, it has evolved as FirstNet continues to develop policies and plans for implementation of the NPSBN.

The service offerings in this section are distinct from others in this Catalog. For example, BB-BRBNDGOV supports stakeholders with issues of governance specific to FirstNet. Similarly, BB-BRBNDPLAN includes different workshops focused on NPSBN related topics. These TA offerings can be tailored as necessary to support States with their specific NPSBN implementation efforts.

Broadband systems and engineering support services include:

TA Catalog Item	Presentation	Deliverable(s)	Audience
BB-BRBND101: Broadband Overview and Education	Seminar (1/2 Day)	Workshop Presentation	Mid-Senior Level Managers
BB-BRBNDGOV: Broadband Governance	Workshop (1 Day)	Draft Documents, Models & Charters	Mid-Senior Level Manager
BB-BRBNDPLAN: First Net Pre-Consultation Planning Workshop	Workshop (1/2 Day)	MDST Support, GIS, SCIP Annex	S/L/T Government
BB-BRBNDLTE: Broadband Engineering and Data Collection	Seminar (1/2 Day)	LTE Coverage Map/ CASM Training	Public Safety Professionals

BB-BRBND101: Broadband Overview and Education

Description

Since submission of States' proposals for NTIA's State and Local Implementation Grant Program (SLIGP), OEC/ICTAP has been assisting with identifying and defining FirstNet coverage objectives through planning and mapping.

This offering is a half day presentation seminar for mid to senior level officials about the scope and direction of the National Public Safety Broadband/First Net initiative. It is designed to help State/local and Tribal officials understand the scope and purpose of NPBSN and FirstNet's efforts to implement this nationwide digital network.

The seminar focuses on the following topics and may be customized to meet a requestor's specific needs:

- Planning for FirstNet implementation in a State
- Working across multi-state regional requirements
- Highlights of LTE technology
- Legislation affecting NPSBN/FirstNet
- State and Local Implementation Grant Program (SLIGP)
- Next steps and future planning

Deliverable

- Seminar presentation

Broadband workshops are designed to assist States in preparing and planning for deployment of the National Public Safety Broadband Network (NPSBN). OEC has four offerings to help requestors prepare for FirstNet/NPSBN implementations.

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BB-BRBNDGOV: Broadband Governance

Description

OEC can further aid States in establishing their governance structures, or expand their existing structures, for the consultation process with FirstNet. OEC has developed draft by-laws, charters, and executive orders, which are customized during on-site workshops to help States formalize their governance structures.

OEC can also tailor future governance assistance including documentation, models, charters, and workshops to specifically reflect FirstNet consultation and NPSBN requirements for States. In addition, OEC has significant experience working with Tribal Nations and can assist with the integration of Tribes into broadband planning efforts.

Deliverables
- Workshop handouts
- Assessment of existing governance structures
- Draft charters, inter-agency agreements, or other governance documents
- Development of governance best practice materials

BB-BRBNDPLAN: First Net Pre-Consultation Planning Workshop[13]

Description

As discussed in its 2014 business plan, FirstNet mandates an effort that will "prioritize outreach and data collection for State, City, Local, and Tribal to support developing State plans." Beginning in October 2013, FirstNet plans to consult with each State to determine:

- Construction of a Core and Radio Access Network build out
- Placement of towers

- Coverage areas of the network

- Adequacy of hardening, security, reliability, and resiliency requirements

- Assignment of priority to local users

- Assignment of priority and selection of secondary users

- Training needs of local users

In support of First Net, OEC is helping States prepare for their upcoming consultations with FirstNet. OEC has made this support a national TA priority to support all 56 States and territories, and FirstNet has stressed that the OEC workshops are an important preparatory step in advance of their FirstNet consultations. This offering does not count against the allotted five standard requests.

The first part this four hour workshop gives participants an overview of broadband technology, the NPSBN, and FirstNet. OEC/ICTAP staff can answer questions about the planning, structure, and operation of the proposed network. The rest of the workshop is then spent helping participants understand what should be included in State plans and how to gather data, build consensus, and determine priorities for coverage and system needs. OEC/ICTAP also focus discussion on how the State can engage and share information and how broadband tools can make public safety efforts more efficient and effective.

OEC/ICTAP provides a set of State-specific data as a starting point for discussions on system users, coverage areas, and levels of coverage. The first data set presents geographic information (GIS data) on boundaries; roads; population density; and the location of agencies, facilities, and critical infrastructure. The second data set focuses on coverage levels, including in-building/ handheld,

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[13] Previously titled "Broadband Planning"

handheld/partial in-building, vehicular modem/partial handheld, and satellite/deployable. The presentation then shows the State's current coverage at each of these levels as well as where commercial LTE and voice coverage is advertised to exist in the State. Data are also provided at a county-by-county level.

After the GIS data are introduced, participants add to what was presented and provide additional information specific to the State and the operation of public safety within it. In this exchange, participants share important details that will inform coverage decisions. For example, in Wisconsin public safety agencies use high schools as emergency staging areas during significant events, and Maine is seeing a greater demand for public safety in its rural and wooded recreation regions. The workshops can be particularly productive when participants share specific information, data, concerns, and needs.

As a wrap up to this workshop, participants discuss their next steps the State or territory needs to take to advance its preparation for meeting with FirstNet. This workshop can be repeated in separate morning and afternoon sessions.

Deliverables

- Workshop materials
- State GIS data
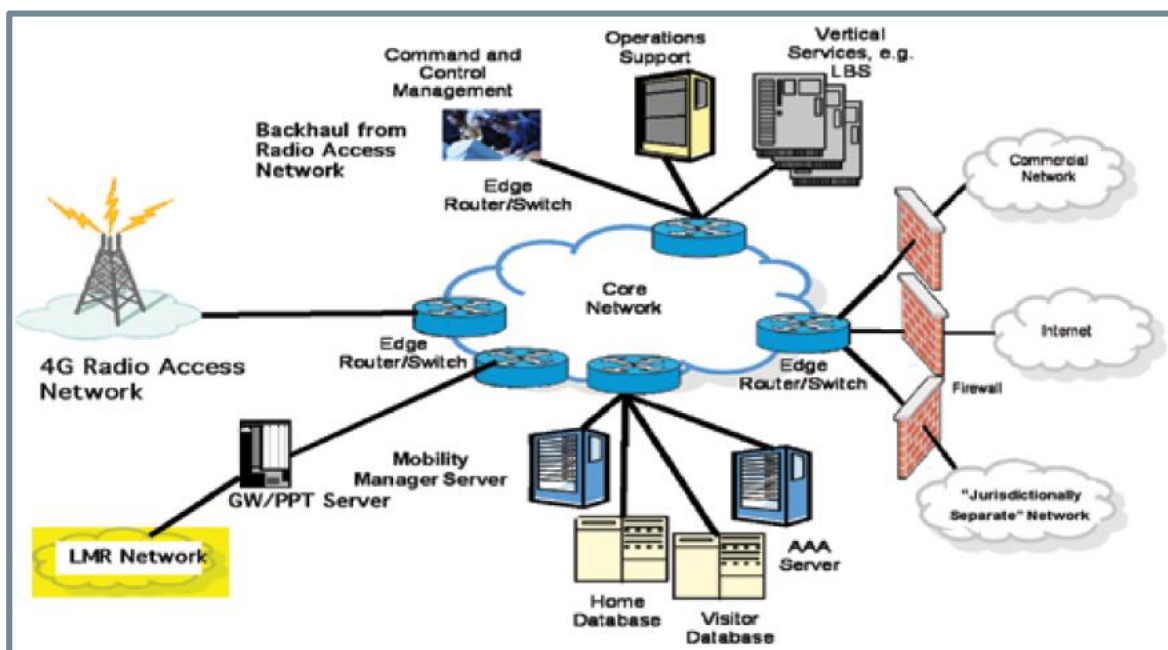
The FCC's National Broadband Plan outlines broadband support to public safety. This figure depicts a notional public safety broadband architecture as illustrated in the Plan, which is available at www.broadband.gov/plan

BB-BRBNDLTE: Broadband Engineering and Data Collection

Description

This offering is a flexible one that focuses on technical support related to LTE and FirstNet. For example, OEC/ICTAP can conduct LTE RF coverage predictions to evaluate the level of coverage provided by existing state/local assets. These results can then be leveraged in education and outreach materials. Additionally, as states begin to assess the feasibility of using existing infrastructure, leveraging the new site survey tool being developed as part of CASM Next Generation (NextGen) is available. The new site survey tool will allow detailed data capture of radio sites, shelters, microwave and backhaul, and towers. Requestors may use this site survey tool to support their SLIGP Phase 2 data collection effort.

Requestors may also use this offering for in-depth educational briefings on LTE technology that help audiences understand the technical differences between LTE and land mobile radio technologies. This presentation will be of benefit to technical planning committees, engineers and others assessing a state's existing RF infrastructure and anticipated changes or modifications needed for LTE coverage.

Deliverables
- RF propagation predictions of LTE coverage
- Training and execution of site surveys using the CASM NextGen Site Survey Tool

The BB-BRBNDLTE offering includes discussion for both senior managers and technologists about Long Term Evolution and its capabilities for public safety.

Communications Systems Engineering Support

F or any interoperable communications solution to be accepted and used, the underlying technology must be robust, reliable, intuitive, and trusted. OEC/ICTAP offers objective third-party services to help public safety radio administrators enhance their Land Mobile Radio (LMR) and data system networks and make informed decisions about technology.

These services can help State/Territory, tribal, regional, or urban area public safety agencies develop confidence in their chosen interoperability solutions, use those solutions more effectively across their respective areas, and improve the technological capacity to support day-to-day and large-scale interoperable communications needs.

Communications systems engineering offerings cover all phases of a communication system's life cycle — defining requirements, identifying solutions, implementing the system, and supporting existing systems. These services include offerings such as system analyses, Project 25 (P25) standards information sharing, system performance analysis, narrowbanding, broadband issues, hands-on equipment training, and others as requested. OEC/ICTAP's communications systems engineers bring expertise in areas such as system configuration options, RF coverage, LMR standards, microwave technologies, data interoperability, narrowbanding, broadband wireless, national spectrum requirements, etc. They also advise and participate in other service offerings such as exercise observation and analysis, communications plan development, and communications unit training.

Communications systems engineering support services include:

TA Catalog Item	Presentation	Deliverable(s)	Audience
ENG-AG: Audio Gateway Information and Training	Workshop (1 Day)	Workshop Materials/CD	Communications Technicians/Operators
ENG-COV: RF Coverage Prediction and Propagation Testing	RF Coverage Maps (Scope Dependent)	RF Analysis Report	Public Safety Professionals
ENG-DS: Data Systems Interoperability	Site Assessment (Scope Dependent)	Assessment Report	Emergency Management Agencies
ENG-DT: RF Coverage Drive Test Measurements	RF Drive Test Data (Scope Dependent)	CAT (measurement) Data	RF System Managers
ENG-MIG: LMR System Migration	Data Assessment (Scope Dependent)	System Migration Report	Communication System Engineers
ENG-MW: Microwave Design Analysis	Data Assessment (Scope Dependent)	Microwave Assessment Report	Microwave System Engineers
ENG-NG9-1-1: Next Generation 9-1-1	Seminar (1 Day)	Presentation Materials	PSCC Managers
ENG-P25W: P25 Land Mobile Radio Workshop	Seminar (1-Day)	Presentation Materials	Public Safety Professionals
ENG-RP: Radio Programming and Training	Workshop (1-2 Days)	Radio Program Files & Procedures	Agency Staff
ENG-SHARE: Shared Resource Analysis and Coordination	Data Assessment (Scope Dependent)	Requirements / MOUs	S/L/T & Federal Government
ENG-SITEID: Site Identification and Sharing Agreement	Equip Inventory & Data Analysis (Scope Dependent)	Site inventory, Assessment	S/L/T & Federal Government
ENG-SYS: LMR System Analysis	Final Data Assessment (Scope Dependent)	Engineering Report	Radio System Planners

ENG-AG: Audio Gateway Information and Training

Description

This offering provides different levels of understanding on gateway (that is, audio bridge) functionality and operations. Participation in all three modules should prepare State/Territory, tribal, regional, or urban area personnel for activation and deactivation of available gateways.

It consists of three modules:

- Gateway Overview. A high-level overview for personnel requiring a basic understanding of gateway functionality.
- Advanced Gateway Operation. Targeted for personnel such as Communications Unit Leaders (COML), Communications Unit Technicians (COMT), and agency communication specialists who need a more advanced understanding of gateway operations; for example, use-specific issues such as co-site RF interference.
- Gateway Hands-on Configuration. This module focuses on specific equipment and is for gateway installers, maintenance technicians, and specialists.

The workshop's lectures, discussions, and practical exercises are focused on the gateways specific to the site and are intended to prepare personnel in the region to quickly activate and deactivate their own equipment. The total workshop is approximately six to eight hours long. Each module is intended to build on previous module(s). The training session can accommodate approximately 20 students for modules 1 and 2 but no more than ten for module 3.

Deliverables

- Workshop and presentation materials
- References (CD)
- Available gateway firmware updates
- Simulation software

Audio gateway devices simultaneously cross-connect different radio systems. The ENG-AG offering provides instruction on how to set up and operate gateway devices from several vendors.

ENG-COV: RF Coverage Prediction and Propagation Testing

Description

This service provides requestors an assessment of radio frequency (RF) system coverage (for example, coverage footprints) for a State/Territory, tribal, regional, or urban area. Existing LMR systems may not provide adequate RF coverage for an entire operational area. Coverage gaps impact the ability of public safety professionals to communicate and may significantly hinder their response. RF coverage prediction maps, therefore, allow radio system administrators to visualize RF coverage, to baseline system performance prior to any changes or upgrades, to identify potential for co-site RF interference, and/or to determine where gaps occur in both existing and proposed radio networks.

OEC/ICTAP communications systems engineers can provide RF coverage prediction maps in various forms including traditional static images and dynamic, interactive graphical representations using Google Earth™. These maps can be used as a tool to plan for:

- Current system upgrades (for example, new tower locations, new antenna locations, and frequency band changes)
- A catastrophic infrastructure loss (for example, collapsed tower, equipment power loss, and damaged repeater)
- System migration by providing an independent assessment of proposed system coverage

State/Territory, tribal, regional, or urban areas may request RF coverage prediction maps in various forms, based on their reporting needs. The content and depth of the final deliverables are determined by user needs and are tailored to the requirements of each individual request.

OEC/ICTAP RF engineers utilize a frequency mapping tool (FMT) to identify appropriate frequencies from the Federal Communications Commission (FCC) database and assess their geographical coverage.

Frequencies and tower sites are selected from the FCC database and displayed using Google Maps™. A three-dimensional display is then provided by using Google Earth™. This allows for a much more useful assessment of the type of terrain so that coverage map models can be adjusted to more meaningful parameters. Deliverables can be tailored to the requestor's specific requirements.

Deliverables
- Images in Microsoft® PowerPoint® presentations
- RF coverage analysis report
- Google Earth™ files

RF coverage prediction and testing are critical components to be completed prior to deploying new wide area network radio systems.

ENG-DS: Data Systems Interoperability

Description

As LMR voice systems become more robust, especially as the migration to P25 standard-based equipment becomes more substantial, an increasing number of State and local emergency management agencies are turning attention to data systems interoperability as their next area of focus.

This service offering provides an assessment of current data systems capabilities, identification of future needs, identification of options to meet these needs, and assistance with the development of requirements documents. For example, user requirements may include assessments of low bandwidth mobile data terminals, high bandwidth video/graphics and data files, and medium bandwidth data transfers between Emergency Operation Centers.

Options for consideration include low data rate mobile data terminals available from various voice vendors, commercial services, stand-alone data systems, and various off-the-shelf technologies (for example, 4.9 GHz, WiFi, LTE). Issues to be addressed include migration options, own or lease, data and voice integration, and operating band. OEC/ICTAP can also provide assistance with review of the technical portion of proposals and acceptance testing of selected systems.

Interoperability assessments include the integration of existing internal disparate systems, diverse protocols, infrastructure design review of both RF and land based networks, backhaul design review, RF system access points, and system security risks. Other factors related to assessments of data systems' interoperability may include the types of applications running on the network, bandwidth requirements, system traffic/usage, and connections/interfaces with external systems.

Deliverables
- Site collaboration presentations and discussions
- Final assessment report
- Final assessment presentation

ENG-DT: RF Coverage Drive Test Measurements

Description

In this service offering, OEC/ICTAP engineers collect measurements of system strength in order to assess the true performance of a LMR system.

Existing LMR systems are typically designed or characterized by prediction models and software. This methodology alone may not provide an adequate level of prediction accuracy for important region-wide radio system decisions. However, using field strength measurements from a user's existing system provides real-world data to calibrate prediction software applications, thereby improving accuracy.

The results of RF coverage drive tests can be used to define and refine system coverage requirements, provide information for system implementation, and enhance existing system operations over the course of the radio system's life cycle. For existing

OEC/ICTAP works with local stakeholders to develop a coverage map and identify coverage gaps.

systems, Drive test data can be used to supplement baseline coverage studies. For new system implementations, a Coverage Acceptance Test (CAT) is performed by the installer to determine if the installed system meets the design requirements. Drive test data from this technical assistance service can supplement the CAT. OEC/ICTAP also provides requestors a detailed explanation of the analysis methodology used.

States/territories, tribes, regions, and urban areas receive OEC/ICTAP drive test data in various forms, based on their reporting needs. The final deliverables are tailored to meet the requirements of each individual request.

Deliverable

- Measurement data (Microsoft® Excel®, MapPoint®, Google Earth™)

ENG-MIG: LMR System Migration

Description

This service offering assists State/Territory, tribal, regional, or urban area users in implementing a migration strategy to move from a legacy LMR system to a new P25 standards based system. There are three phases of this support. For the first phase, OEC/ICTAP communications systems engineers review and analyze current system utilization, including:

- Jurisdictional boundaries
- Essential talkgroups
- Frequencies
- Coverage boundaries
- Tower locations
- Subscriber radio capabilities
- Other related parameters

As a second phase to this effort, OEC/ICTAP engineers review and analyze new system documentation or plans in order to better provide recommendations for a switch-over. The third phase of this service includes recommendations on a migration plan that utilizes information gathered in Phases 1 and 2. Phase 3 includes consultations and discussions with the system users, administrators, equipment providers, and installers to establish a switch-over strategy. There are many factors to be taken into account within a migration plan. Some factors to consider are:

- Utilization of a new frequency band
- Frequency availability during new system testing and transition
- Limits and durations of acceptable systems down-time
- Timeline constraints
- Radio programming logistics

Consideration also needs to be given to whether multiple subscriber radios will need to be employed during the migration period. User training is an important aspect and can include training on: talkgroup structure; coverage area; and intermediate and long-term usage procedures. If some users migrate prior to others, temporary interoperability solutions may have to be employed in order to retain communications among all users.

Deliverables

- Site collaboration presentations, documents, or discussions
- System migration report

ENG-MW: Microwave Design Analysis

Description

In this service offering, OEC/ICTAP communications systems engineers analyze microwave design documentation to determine if the proposed specifications meet the needs of the State/Territory, tribal, regional, or urban area requestor.

OEC/ICTAP can review design documentation to determine if specifications meet the requesting jurisdiction's requirements.

System backbones provide reliable and robust high-speed voice and data traffic between geographically separate communications sites. Proper backbone design is critical in order to maintain the Nation's public safety LMR systems. Microwave links are a common method used to provide these backbone communications.

An OEC/ICTAP microwave design analysis provides requestors an objective third-party report that may be used to assist system managers in decision making, as an initial design to be included in a Request for Proposal (RFP), as a supplementary information source in LMR system proposals, or for general information about microwave systems.

OEC/ICTAP presents the results of the microwave design analysis through an individual assessment report or in combination with other OEC/ICTAP engineering services. The assessment report may include a microwave system design, a microwave path analysis, and recommendations on equipment selection. The final deliverables are tailored to meet the requirements of the individual request.

Deliverable

- Microwave assessment report

ENG-NG9-1-1: Next Generation 9-1-1

Description

This service offering supports PSCC managers and senior personnel with the challenges presented by integrating Next Generation 9-1-1 (NG9-1-1) digital communications into the workplace.

NG9-1-1 networks are replacing circuit switched 9-1-1 networks, which carry voice and very limited data. Currently PSAPs/9-1-1 centers experience technical and procedural challenges incorporating technologies like voice over IP (VoIP) 9-1-1 calls, text messages, images and video, telematics data, building plans and medical information over a common data network.

Increasingly, PSCCs need to support communications and data transfer across county, State, and international borders as well as various emergency response disciplines and agencies. NG9-1-1 is a system comprised of hardware, software, data and operational policies and procedures which continue to evolve. This offering focuses on technical issues, including:

- Standardized interfaces from call and message services
- Processing non-voice (multi-media) messages
- Integrating data useful for call routing and handling
- Delivery of calls/messages and data to appropriate PSAPs
- Supporting data and communications needs for coordinated incident response and management
- Strategic planning for NG9-1-1 implementations

Text messaging, instant messaging/chat, video, images/graphics, photos and telematics received via IP-networks all present significant technical and operational and challenges. PSCC call takers and dispatch personnel will have to move from a business process of handling incoming calls channeled through a single mode to processing and disseminating multi-media inputs received in multiple modes. Managers and senior personnel need to be familiar with the rapidly evolving technologies behind this change.

The acquisition and deployment of NG9-1-1 platforms and services — even as standards, policies, and procedures still need to be codified — managers are faced, in turn, with training personnel to recognize and understand disparate data inputs and translate them into actionable information for first responders. This offering is designed to help managers and senior staff with issues such as:

- Technology transition, integration, and deployment
- Technology assessments for call handling and processing
- Data handling, storage, and retrieval issues

Deliverables
- Presentation materials
- Related information, reference sources

*Next Generation 9-1-1 (abbreviated **NG9-1-1**) refers to an initiative aimed at updating the 9-1-1 service infrastructure in the United States and Canada to improve public emergency communications services in a wireless mobile society. In addition to calling 9-1-1 from a phone, it intends to enable the public to transmit text, images, video and data to the 9-1-1 center.*

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ENG-P25W: P25 Land Mobile Radio Workshop

Description

This offering provides progressive levels of instruction about P25 standards and consists of five modules.

The Project 25 "Overview" module provides a basic understanding of the P25 LMR system for technical and non-technical attendees. It covers P25 features including the current status and future direction of the P25 standards development.

The Project 25 "Features and Services" module provides a more in-depth review for the LMR system decision maker, manager, administrator, and/or users, it is designed to help maximize system operability and interoperability between agencies.

The Project 25 "ISSI Status" module provides a short overview of the P25 Inter-RF Subsystems Interface (ISSI) to educate attendees on the status of this standard for LMR inter-system interoperability. The capabilities and implementation road map are covered to help LMR system administrators plan for its deployment in their systems.

The VOIP and ROIP module provides a short overview to help public safety communications professionals understand Voice over Internet Protocol (VoIP) and Radio over Internet Protocol (RoIP) as a possible interoperability solution.

The "Introduction to Radio Wave Propagation for Public Safety" module discusses applicable radio wave propagation theory, prediction/planning, and coverage measurements. It is geared toward the system planner/designer to help evaluate a manufacturer's designs and acceptance test planning procedures. It should also help participants avoid common mistakes in proposed design improvements for fill-in system expansion. It includes hands-on use of the RF planning tool.

The first four modules are presented via webinar and last one to four hours. Introduction to Radio Wave Propagation for Public Safety is a one-day on-site seminar. The first four modules can accommodate 20 participants; the last is limited to eight.

Deliverables
- Workshop and presentation materials
- Reference materials (CD)

ENG-RP: Radio Programming and Training

Description

Whether programming new narrowband channels, updating radio programming to include nationwide / statewide / regional interoperability channels, or renaming channels with standardized names, agencies may need assistance re-programming radios which use frequencies in the 150-174 MHz and 421-512 MHz ranges. Agencies may need to train in-house staff to augment outside resources such as radio service facilities to re-program and test their radio equipment. This offering shows an agency's in-house staff how to update radio programming files with new narrowband channels. It will help agencies use in-house personnel to re-program and test equipment in a short, compressed timeframe. OEC/ICTAP staff will work with site personnel to:

- Review existing programming files for a family of radios (for example, EF Johnson 5100 and 5300; Harris P7300, Motorola XTS 2500, XTS 5000, etc.)
- Help the site POC identify a new channel plan with narrowband channels
- Assist with adoption of the common channel naming conventions (ANSI Standard)
- Help develop new programming files and procedures to reprogram a family of radios
- Provide training with a site POC to program one candidate family of radios including cache radios
- Spot test selected equipment to help agencies verify correct re-programming
- Offer guidance in coordinating re-programming efforts with adjacent jurisdictions that may be impacted by the change
- Help participating agencies submit the changes for modification to Tactical Interoperable Communications Plans (TICPs) or other related SOPs and for any updates to CASM
- With the site POC spot review FCC Universal Licensing System (ULS) licenses for which Narrowband License Status Tool (NLST) reports indicate anomalies such as outdated contact information, erroneous lat/long coordinates, and antenna data

This offering can be leveraged to create standardized channel names and programming templates for a region, by discipline, operating area, etc. Additionally, OEC/ICTAP staff can assist with programming of regional and national interoperability channels to help sites improve interoperability. Channels programmed into the radios can be captured in a standard ICS Form 217a. OEC/ICTAP staff will provide guidance and reference information, but will not perform any radio programming themselves or modify FCC license information.

This workshop involves a telephone conference and webinar meeting with the requestor's POC prior to a site visit and one to two days on site with agency's in-house staff.

Deliverables
- Radio programming files with narrowband and interoperability channels
- Radio programming procedures
- On-site assistance and training as required
- Standardized programming templates with reference guides
- Updated ICS Form 217a

Requestor-provided materials
- Programming software
- Programming interface cables to radios
- Computers
- Coordination with users of radio channels for on-air testing

The ENG-RP offering provides hands-on radio programming guidance to jurisdictions.

ENG-SHARE: Shared Resource Analysis and Coordination

Description

This service offering supports States/territories, tribes, regions, or urban areas that want to develop formal agreements with Federal counterparts about shared communications resources. OEC/ICTAP engineers and staff evaluate requests for shared resources and infrastructure between Federal systems and requesting agencies at the State/Territory, tribal, regional, or urban area levels to help determine the benefits to the departments/agencies. OEC staff can help gather requirements and prepare the documentation to coordinate the requirements with the partnership agencies. To support those interested in developing sharing agreements, OEC/ICTAP staff and engineering services can:

- Coordinate and facilitate meetings with departments and agencies to determine requirements (for example, interoperability, coverage, or subscriber units)
- Facilitate meetings and agreements with State and regional partners
- Provide Memorandum of Understanding (MOU) and agreement templates
- Conduct surveys of proposed sites to determine suitability

OEC/ICTAP engineers make recommendations about department/agency equipment purchase and installation requirements, which allow for non-vendor-specific competitive bidding. OEC/ICTAP can provide analysis of P25 talkgroups and develop talkgroups to support the current and future needs of each department or agency. Acceptance test criteria can be reviewed to ensure that proper system functions are provided. OEC/ICTAP staff can attend the acceptance testing to help ensure that vendors meet the requestors' system requirements.

OEC/ICTAP staff will provide the templates for the MOUs covering system/site sharing and the ownership/use of frequencies and equipment requirements.

Deliverables

- Meeting to determine requirements
- Site survey evaluations
- Equipment lists
- Equipment specification requirements
- Templates for MOUs
- Populated MOUs
- Acceptance test criteria
- Acceptance testing attendance and evaluation

ENG-SITEID: Site Identification and Sharing Agreement

Description

This service offering is designed to help requestors determine the feasibility of potential sites to support emergency communications. If the site can support such requirements, this offering can also help agencies establish MOUs/memorandum of agreement (MOA) to share the site with current tenants. OEC/ICTAP engineers survey the site to gather initial data, validate previously gathered data, or create an updated baseline to determine the feasibility of supporting requirements. The survey may include the following activities:

- Collection and documentation of information to support network design and engineering
- Analysis of the condition of the site
- Collection of information on existing communications shelters
- Development of a list of existing communications equipment installed in the shelter
- Production of tower and shelter elevation drawings
- Analysis of tower loading capabilities
- Assessment of physical site security
- Development and documentation of approaches for physical security

OEC/ICTAP provides templates for defining each participant's responsibilities and commitments concerning the use of the site. OEC/ICTAP staff can provide guidance on the development of a site sharing agreement between the owning agency and other site participants. OEC staff can also advise regarding the representatives who should be parties to the sharing agreement.

Templates and samples for all agreement documents include definitions of the parties, authority, background, purpose, responsibilities, reporting and documentation, POCs, modification, termination, and approvals. OEC/ICTAP can offer recommendations on how to structure the various types of documents and can identify questions and issues that should be addressed when generating content for each of the sections within the various documents.

Deliverables
- List of communications equipment at site shelters
- Tower and shelter elevation drawings
- Tower loading analyses
- Assessment of physical site security
- Sharing agreement templates

ENG-SYS: LMR System Analysis

Description

Proper design of LMR systems is critical to ensure that the Nation's first responders have reliable and robust communications. OEC/ICTAP engineers serve as an independent third party to ensure that design documentation is objective and vendor-neutral.

OEC/ICTAP communications systems engineers analyze proposed system design documentation such as Requests for Proposals (RFPs), proposals and Acceptance Test Plans (ATPs) to determine whether proposed system purchases, changes, or upgrades meet the needs of the State/Territory, urban area, region, or tribal users.

OEC/ICTAP provides the results of the LMR System Analysis in an assessment report which documents discrepancies between user requirements and existing or proposed system capabilities. This report includes engineering recommendations designed to resolve those gaps, improve technological interoperable communications functionality, and enhance regional interoperable communications capabilities. Analysis topics in this assessment may include interoperability, wide area communications capabilities, coverage, capacity, P25 features, and other issues.

In some cases, radio system planners may only need a high-level analysis of existing or proposed LMR system documentation. States/territories, tribal nations, regions, and urban areas may request just a QuickLook analysis of an LMR system migration intended to provide a faster turnaround than an in-depth Assessment Report. As such, the content and depth of the final assessment report is determined by user needs and is tailored to the requirements of each individual request.

Deliverables
- Site collaboration presentations and discussions
- Final assessment report
- Final assessment presentation

Tactical Communications Enhancement Support

T actical Interoperable Communications Plans (TICPs) are designed to document a State/Territory, tribe, region, county, or urban area's interoperable communications technology assets, and usage policies and procedures. First responders can use a TICP to clearly define the breadth and scope of interoperable assets available in the area, how those assets are shared and their use prioritized, and the steps individual agencies should follow to request, activate, use, and deactivate each asset. COMLs can use them as a ready-reference tool to support interoperable and emergency communications across a geographic area.

Completed TICPs were required for all 2005 UASI sites. States/territories, tribes, regions, counties, multi-county regions, and non-UASI cities are encouraged to develop and use them as well.

Tactical Communications Enhancement Support services include:

TA Catalog Item	Presentation	Deliverable(s)	Audience
TIC-FOG: Tactical Interoperable Communications Field Operations Guide Development	Data Collection	Print-ready Draft TIC-FOG	Stakeholders
TIC-PIW: TICP Implementation Workshop	Workshop (1 Day)	Presentation Materials	Responders/ Support Personnel
TIC-UPDT: TICP Update Workshop	Workshop (1 Day)	Draft Updated TICP	Public Safety Professionals
TIC-WKSP: TICP Workshop	Workshop (2 Days)	Draft Populated TICP	Public Safety Professionals

TIC-FOG: Tactical Interoperable Communications Field Operations Guide Development

Description

This service offering is designed to help requestors develop Tactical Interoperable Communications Field Operations Guides (TIC-FOG). Based on the OEC National Interoperability Field Operations Guide (NIFOG), the TIC-FOG is a compendium of interoperable communications reference material for use by emergency response and communications personnel responsible for establishing and maintaining interoperable communications during events or incidents. The TIC-FOG is designed as a pocket-sized quick reference guide that can be carried by radio operators and technicians at all times.

OEC/ICTAP will meet with requestors to determine the desired content and format for their TIC-FOG. If the site would like the information contained in the TIC-FOG to be current with their TICP, an update workshop (TIC-UPDT) can be scheduled to update and to verify the information in it. Once the site has completed its review, OEC will reformat and condense the operationally relevant information from the TICP to develop the TIC-FOG.

The TIC-FOG may contain:

- Area maps (provided by the site)
- Agency/Communications Center POC information
- Interoperable communications equipment request information
- Regional channel data
- Technical support contacts
- Communications Unit Personnel
- Other site specific information
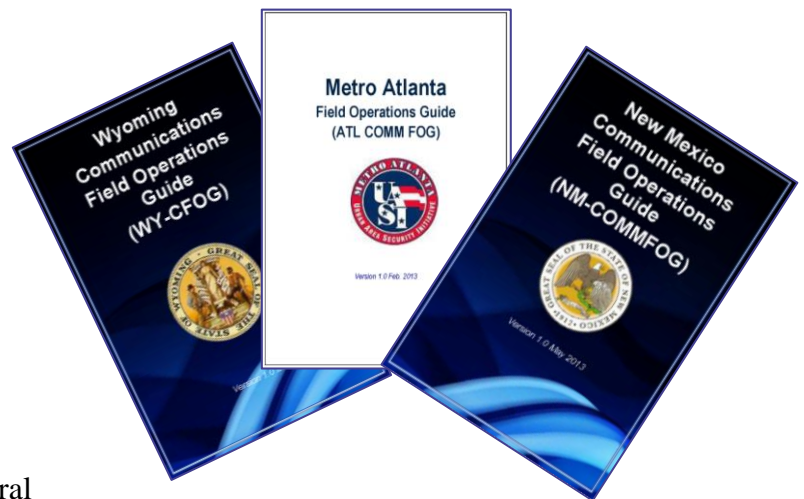
This TIC-FOG offering can also provide general information from the NIFOG and pertinent TICP reference materials, if desired. OEC will provide the site a copy of the "draft" TIC-FOG for review and comment and will incorporate them prior to finalizing the TIC-FOG as a publication-ready work product for the requestor to print and distribute.

Deliverables

- Workshop
- Draft TIC-FOG template and instructions for site's review
- Print-ready draft TIC-FOG

TIC-PIW: TICP Implementation Workshop

Description

This service offering provides a one-day TICP Implementation Workshop is targeted to State/Territory, tribal, regional, or urban area, and/or cross-disciplinary responders, and support personnel.

Once developed and approved, the TICP should be disseminated to all stakeholder agencies. Ensuring that communications users are knowledgeable about the plan and able to implement its components immediately increases the area's ability to maintain appropriate and effective interoperable communications during an event or incident of any size or scope.

Facilitated discussions and activities are focused on the area's TICP, and are intended to prepare emergency response and communications personnel to execute interoperable communications during events or incidents. OEC/ICTAP facilitators familiarize responders and support personnel with their TICP and how to use their TICP as a tool to develop a communications plan. The TIC-PIW includes hands-on activities using local scenarios, personnel, equipment, and communication assets, and can be tailored to meet specific audience requirements, on request.

OEC/ICTAP recommends inviting locally available State/Territory, tribal, regional, or urban area agency personnel at field level to attend the workshop. Suggested participants would include, but are not limited to:

- Law enforcement, fire, and emergency medical service (EMS) communications specialists
- Law enforcement, fire, and EMS incident management staff
- Communication coordinators and supervisors
- Communications Unit Leaders
- Public safety and incident communication center managers
- Radio operators
- Technical specialists
- Regional emergency managers
- Personnel identified to respond to a Type I or II Incident of National Significance

Deliverables

- Workshop and presentation materials
- TICP Implementation Workshop reference materials
- Incident response paperwork and templates (for example, ICS Communications forms, etc.)

TIC-UPDT: TICP Update Workshop

Description

In this service offering an OEC/ICTAP facilitator, data specialist, and communications specialist coordinate and execute a one-day workshop to update an existing Tactical Interoperable Communications Plan (TICP) for a State/Territory, tribal nation, region or urban area. This service offering is available to areas that have an existing, but out of date, TICP.

In order to document the input of all relevant stakeholders and update the TICP in the most efficient and effective manner, OEC/ICTAP provides the requesting area with a list of the information needed prior to the workshop. The requesting area also receives a copy of the plan template that the group will populate during the workshop.

The workshop attendees should include communications and operational representatives from multiple agencies and jurisdictions across all public safety/service disciplines, including tribal, non-governmental organizations, and volunteers, entities in the geographic area covered by the Plan. The working group should mirror the responders, and support personnel needed for a major incident in the area. Suggested participants would include, but are not limited to:

- Law enforcement, fire, and EMS communications specialists
- Law enforcement, fire, and EMS incident management staff
- Communication coordinators and supervisors
- Communications Unit Leaders
- Public safety and incident communication center managers
- Radio operators
- Technical specialists

During the workshop, participants will discuss and update the area's existing governance structures, technology assets, and policies/procedures related to interoperable communications during events ranging from day-to-day operations through large-scale critical incidents. In collaboration with site's attendees, OEC/ICTAP data specialists will populate the TICP template during the workshop with the information discussed and agreed to among the attendees.

OEC/ICTAP will provide examples to help requesters apply interoperable communications best practices and lessons learned from other areas with situations similar to their own. Once the TICP has been completed and approved by the site, a Tactical Interoperable Communications Field Operations Guide (TIC-FOG) (see TIC-FOG offering, p. 86) can also be created.

Deliverables

- Workshop and presentation materials
- Document models and templates
- Draft updated TICP

OEC/ICTAP has assisted all States and territories in the development of their Tactical Interoperable Communication Plan (TICP) during workshops.

TIC-WKSP: TICP Workshop

Description

In this service offering an OEC/ICTAP facilitator, data specialist, and communications specialist conduct a two-day workshop to help requestors develop a new TICP for a State/Territory, tribe, region or urban area. Developing a TICP requires the collaborative efforts and inputs of public safety organizations in the geographic area. In order to document the input of all relevant stakeholders and develop the TICP in the most efficient and effective manner, OEC/ICTAP provides the requesting area with a list of the information needed for the plan prior to the workshop. The requesting area also receives a copy of the plan template that the participants will populate during the workshop.

Workshop attendees should include communications and operational representatives from multiple agencies and jurisdictions across all public safety disciplines, including tribal, non-governmental organizations and volunteer entities in the geographic area covered by the Plan. The working group should mirror the responders and support personnel needed for a major incident in the area. Suggested participants would include, but are not limited to:

- Law enforcement, fire, and EMS communications specialists
- Law enforcement, fire, and EMS incident management staff
- Communication coordinators and supervisors
- Communications Unit Leaders
- Public safety and incident communication center managers
- Radio operators
- Technical specialists

The workshop allows participants to discuss and document the area's existing governance structures, technology assets, and policies/procedures related to interoperable communications during events ranging from day-to-day operations through large-scale critical incidents. In collaboration with site's attendees, OEC/ICTAP data specialists will populate the TICP template during the workshop with the information discussed and agreed to among the attendees. OEC/ICTAP will provide examples to help requesters apply interoperable communications best practices and lessons learned from other areas with situations similar to their own.

Once the TICP has been completed and approved by the site, a Tactical Interoperable Communications Field Operations Guide (TIC-FOG) (see TIC-FOG offering, p. 86) can also be created.

Deliverables

- Workshop and presentation materials
- Document models and templates
- Draft populated TICP

Regional Communications Enhancement Support

T he Strategic Communications Migration Plan (SCMP) establishes a vision for future region-wide interoperable emergency communications. Regions may be defined by requestors as intrastate or interstate. The SCMP helps an area set regional goals and priorities collaboratively to address deficiencies in the region's interoperable and emergency communications structure. It also provides a roadmap for recommendations and milestones for emergency response providers and government officials to improve their regional communications capabilities over time. This plan is designed to:

- Establish a regional vision for current and future communication assets
- Develop a stepped, multi-year plan that allows a region to progress steadily from its current state to a desired end state in a manner that makes effective and efficient use of available and predicted funding sources
- Incorporate needs and recommendations from various groups of local stakeholders regarding ways to steadily improve their regional communication capabilities during the migration process

When completed, the SCMP prioritizes the high-level communications needs for the region and then aligns those needs with key Federal and State guidance documents such as the NECP, Homeland Security Presidential Directive-8 (HSPD-8), the National Preparedness Goal, and SCIP. This alignment helps a region better identify the relation between their priorities and National or States' priorities in an effort to streamline funding and requests for support.

Regional Communications Enhancement Support includes:

TA Catalog Item	Presentation	Deliverable(s)	Audience
RCES-SCMP: Regional Communications Enhancement Support- Strategic Communications Migration Plan	Workshop (2 Days)	Populated Draft SCMP	Stakeholders

RCES-SCMP: Regional Communications Enhancement Support - Strategic Communications Migration Plan

Description

In this service offering OEC/ICTAP staff facilitates a two-day workshop to develop the SCMP based on a regional needs assessment of communications assets. The first day of the workshop is a data gathering session focused on:

- Documenting existing regional communications capabilities
- Discussing gaps in regional communications and the impacts of those gaps on the public safety community's ability to execute their mission, and
- Identifying and prioritizing regional communications requirements

The second day focuses on incorporating this information into a strategic regional plan and working with regional stakeholders to incorporate their information into the SCMP template provided by OEC/ICTAP. An OEC/ICTAP data specialist will populate the SCMP template with the information discussed during the first half of the workshop. OEC/ICTAP facilitators may augment the discussion with examples to help requesters apply communication best practices and lessons learned from other areas of the Nation.

Developing a complete and usable SCMP requires the collaborative efforts and inputs of the local public safety professionals in the region. In order to document the input of all relevant stakeholders and develop the SCMP in the most efficient and effective manner, the workshop provides an opportunity for stakeholders to define their individual and regional operational needs, identify commonalities between the goals and needs of various stakeholder groups, develop regional migration goals and priorities that capitalize on those commonalities, and establish milestones to facilitate achieving each goal and priority.

The most successful SCMPs are therefore developed based on strong and diverse representation from stakeholders from all of the various disciplines, jurisdictions, and agencies across a region. The requesting regional working group (workshop attendees) should include representatives from multiple area agencies and jurisdictions across all public safety/service disciplines, including non-governmental organizations, volunteers and tribal entities.

The working group should mirror the responders and support personnel needed for a major incident or planned event in the region. For an interstate workshop, only one SWIC in coordination with counterparts in the other States needs to request this as a TA service offering.

Deliverables
- Workshop and presentation materials
- Document models and templates
- Populated draft SCMP

OEC/ICTAP assists with the development of strategic communications migration plans.
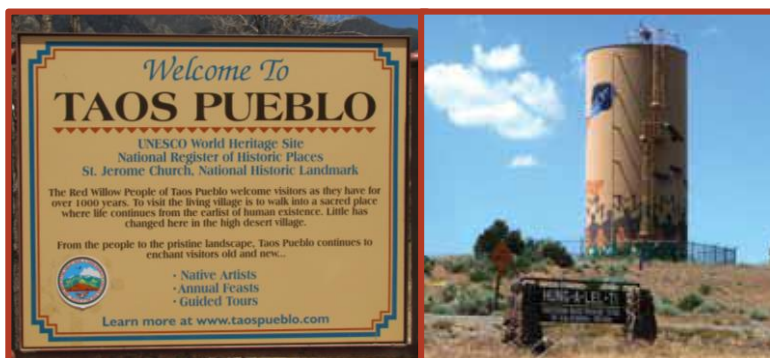
Tribal Nation

TRBL-SPCL: Tribal Special

D uring FY2014, OEC/ICTAP will continue to provide a special focus to Native American public safety agencies in the form of extended TA offerings. These offerings will be tailored to the specific tribal public safety agency's requirements; for example, an introduction to NIMS may also benefit from COMT and COML workshops at the same time. OEC/ICTAP will provide tribal requestors with a team of interdisciplinary staff who can assist and support in the following areas:

- Evaluate legacy LMR systems and assess the need for upgrades, replacements
- Draft statements of work/statements of requirements for procurements relating to new radio and data communications systems
- Establish high-level objectives, milestones, and metrics for interoperable emergency communications projects
- Consult on policies and procedures for tribal emergency notifications policies and tools
- Planning the integration of broadband technologies into public safety operations in Indian Country

Tribal Nation POCs may request this offering via email to OEC@dhs.gov. Tribal Nation Support includes:

TA Catalog Item	Presentation	Deliverable(s)	Audience
TRBL-SPCL: Tribal Special	Workshop (1-2 Days)	Tailored to the request	Tribal

OEC/ICTAP continues its outreach efforts with Tribal Nations to support requests for customized technical assistance.

Communication Assets Survey and Mapping (CASM) Tool Support

O EC/ICTAP provides at no-cost to requestors a secure, automated web-based tool for all State/local public safety agencies to store, retrieve, and visualize their radio communications assets and the interoperability these assets can provide to using agencies.

Currently, CASM stores data from nearly 50,000 agencies nationwide on a secure server with multiple levels of access depending on authorizations. CASM maintains data about public safety radio communications equipment owned and operated across all public safety disciplines; however, it is not a complete inventory of the Nation's emergency communications equipment. CASM outputs support development of TICPs and the ICS Form 217a, "Communications Resource Availability Worksheet" used by a COML. Additionally; OEC/ICTAP can create custom map "views" of CASM data upon request to support regional planning. The accuracy and currency of all data is the responsibility of the using agency.

CASM provides a means to enter, edit, and delete information about agencies, communication assets (such as radio systems, PSCCs, mutual aid channels/sets, gateways, radio caches and Mobile Communication Assets), and agency usage of the assets. CASM also provides a means to display this information in a GOOGLE ™ map-based interface.

Version 1.6.0 features Mobile Communication Assets (MCA) and a web services interface. The MCA feature allows users to input information for radio caches, gateways, tactical repeaters, mobile communications units, radio systems, towers, satellite phone caches, cellular phone caches, satellite data systems, cellular data systems, video telecom systems and IP telephone systems. The web services interface provides a data exporting capability so that other systems can utilize CASM data once they develop their portion of the interface. CASM Version 1.6 features are highlighted in the following table.

CASM VERSION 1.6 FEATURES
Mobile Communication Assets: Provides the capability to inventory 12 different types of Mobile Communication Assets (MCSs), including vehicles/units. This function supports attaching supporting multimedia files (pictures, video, documents) to each asset.   Existing radio caches and incident/event-use gateways were *translated* into an MCA (fixed, day-to-day use gateways remain as fixed assets).
Web services interface: Web services provides the capability to automatically return CASM export information to an authenticated invocating application.
Moving Agencies' Geographic Locations: This capability allows a user in CAS Google Maps™ to move an agency on the map from its general jurisdictional location to its actual, physical location (for example, a specific street corner) and save that new location.
Filtering for Selecting Objects: The CAS Google Maps™ Filter allows specifying the type of agencies and assets to display, versus the old "all or nothing" approach. The default selection is to display all local-level law enforcement, fire, and EMS agencies and all radio caches and gateways to support the COML. Users may select specific agency levels as Federal, State, County, and Local.
NIMS Discipline Types: CASM now supports defining an agency in accordance with the ten NIMS disciplines. New discipline types include: emergency management, hazardous materials, law enforcement and the combined fire/EMS. Existing police, highway patrol and sheriff agencies have been re-designated as LEA. Users may also edit Agencies to more accurately specify their discipline. The Map Legend in CAS or CAM introduces the new agency icons.
Agency's Political Level: CASM now supports defining an agency at the Federal, tribal, State, County, or Local level to support filtering on the CAS Google Maps™, and for future filtering features. Agency levels are automatically set according to their primary jurisdiction for State, County, and Local. Users may edit agencies to more accurately specify their discipline, especially at Federal and tribal levels.
CAM-Only Privilege Login to CAS: Users with CAM-Only privileges may now access the CAS Google Maps™ and ICS-217a worksheet function. CAM-Only users may now login to CAS and perform all functions except editing of objects.
Completeness Review: CAS Summary pages now list additional information for agencies/assets including points of contact for all agencies/assets, agencies use of radio systems, and channel/talk group use radio systems and mutual aid channels.
Radio System Frequency Band Designators: CASM now enables selection of four additional frequency bands for Radio Systems: UHF Federal and Military (380-430 MHz), VHF 220-Band (220-222 MHz), VHF High-Band Federal (136-144 MHz), and Multiband. The Map Legend reflects new radio system icons.
NB/WB, Analog/Digital/Mixed Mode and Encryption Protocol: The Add/Edit Channel page for Radio Systems, Mutual Aid Channel/Sets, Agency Channels and Radio Cache Channels allows specification of these detailed characteristics at the channel level.
TICP Reports: Any user can generate a TICP Report directly from the CAS Reports page; it is available from the list of report types.
Primary/Secondary Radio System Usage: TICP reports can be updated to reflect an agency's use of Inter/Intra-System Shared Channels as its primary or secondary radio system.

The CASM support offering includes:

TA Catalog Item	Support Activities	Deliverable(s)	Audience
CASM-IMPORT: Data Import/Update	Data Collection	CASM Database Update	CASM Account Managers
CASM-INPUT: TICP/SCIP Interoperability Equipment and Usage Input	Upload TICP, SCIP or FOG	CASM Database Update	CASM Account Managers
CASM-REV: Data Review/Analysis	CASM Data Review/Verification	CASM Analysis Report	CASM Account Managers
CASM-STRAT: Roll-Out Strategy Webinar	Stakeholder Planning	CASM Roll-Out Strategy	Stakeholders
CASM-TRAIN: Training	Onsite or Go-To-Meeting	Training Brief	Stakeholders

In addition to these CASM services, help for CASM-related issues is provided via e-mail at PSToolsHelp@dhs.gov and through regularly scheduled Targeted Training webinars that offer a combination of services within a single TA Request. Following acceptance of the CASM Support TA Request, OEC/ICTAP staff will determine the details and scope of support with the requestor at a kick-off meeting.

OEC/ICTAP expects to release a new version of CASM, "CASM NextGen" in early 2014. CASM NextGen will provide users a tool with greatly expanded capabilities and functions. The following is a brief list of new features users will experience with this new release:

- Nationwide view of communication assets vice existing "state-centric" view

- Integrated map views providing CASM, FMT, SWIC tool, MDST and SST map layers

- Communication Infrastructure/Backhaul map overlays

- Consolidated User Interface

- User profile-based access

- Improved information sharing

- Enhanced reporting

The current version of CASM, version 1.6 will be available to users for approximately two months after CASM NextGen release to facilitate the transition from the legacy system to NextGen. The existing CASM version 1.6 database will be "translated" to the new CASM NextGen database format prior to release so that users will experience no loss of data and minimal disruption.

CASM-IMPORT: Data Import/Update

Description

This service offering provides a mechanism for importing/updating data directly into the CASM database. The intent of the data import service is to expedite the task of manually entering voluminous amounts of data into CASM that may already exist in another database. The import/update will now allow any/all information for an object to be made directly into the CASM database. Data import/update instructions and templates are provided in the CASM Data Import/Update Service listed under CAS 'Help' on the CASM Website, which is accessible through www.publicsafetytools.info. A valid CASM user ID and password are required to access CAS 'Help'. Types of data that can be imported/updated include:

- Agencies
- Channels provided by a radio system, used by an agency, or programmed in a radio cache
- Talk groups provided by a trunked radio system, used by an agency, or programmed in a radio cache
- Towers used by a specific radio system
- Repeaters/base stations for a radio system on towers
- Dispatch centers and the agencies served
- Points of contact

Once the data is provided to OEC/ICTAP staff, it will be reviewed for duplicates to existing data already in CASM. OEC/ICTAP staff will discuss and resolve inconsistencies and/or data errors with the provider prior to the physical import.

Deliverable

- CASM database update for the State/Territory/urban area

CASM-INPUT: TICP/SCIP Interoperability Equipment and Usage Input

Description

This service offering provides support for inputting information into CASM about interoperable radio equipment described in the State/Territory, tribe, region, or urban area's TICP, SCIP, or FOG. The objective of this service is to synchronize the interoperable equipment description and usage specified in a TICP/SCIP with the State/Territory, urban area, region, or tribe's CASM dataset. The requestor provides OEC/ICTAP the TICP or SCIP document, and the specified information about radio equipment is then entered into CASM as a one-time effort. Requestors will be expected to maintain the data in CASM. The TICP and SCIP POCs may be asked to resolve detailed questions.

Deliverable

- CASM account populated with TICP/SCIP/FOG data
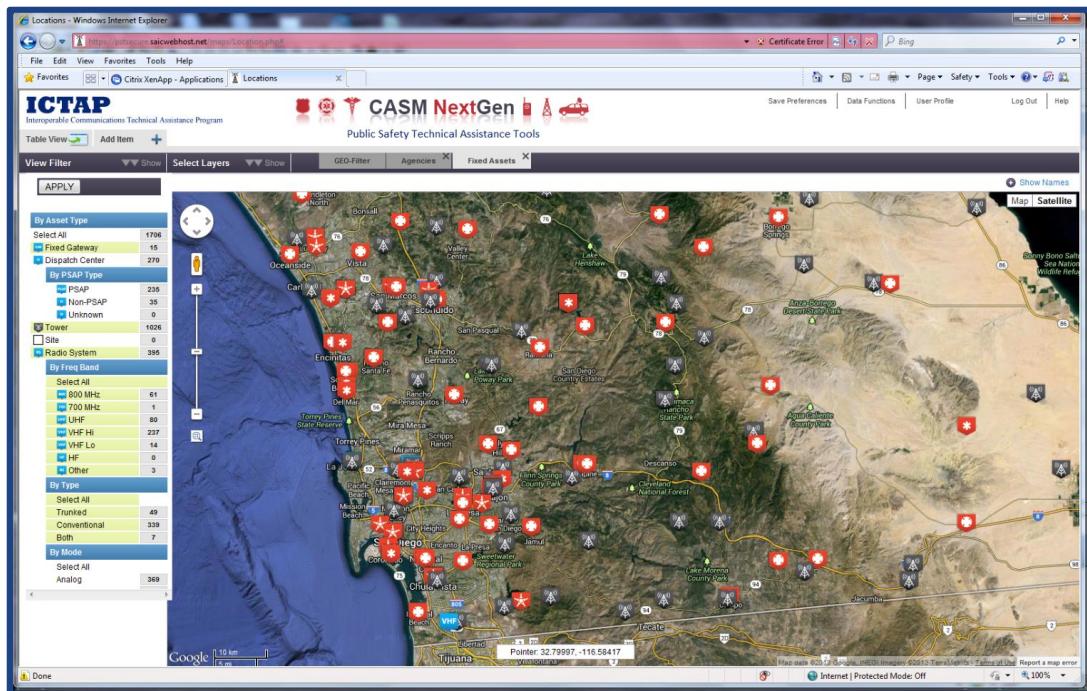
The Communication Assets Survey and Mapping (CASM) tool is a standardized collection method for emergency response agencies to store and visually display data about their public safety communications assets and how those assets are used.

CASM-REV: Data Review/Analysis

Description

This offering provides an OEC/ICTAP review and analysis of data entered into CASM by State/Territory, tribal, regional, or urban area representatives. This review will analyze the data to identify any incomplete, inconsistent, or anomalous values. The scope may involve any or all jurisdictions including the entire State/Territory, tribe, region or urban area, counties, municipalities, individual agencies, or subsets of their data to be reviewed. The review will also provide suggestions about the data that might be taken to provide a more accurate picture of interoperability. These suggestions will help the requestor rectify anomalous data entries and better utilize CASM to provide a more accurate picture of interoperability in a specific geographic area.

Deliverable

- CASM review/analysis report
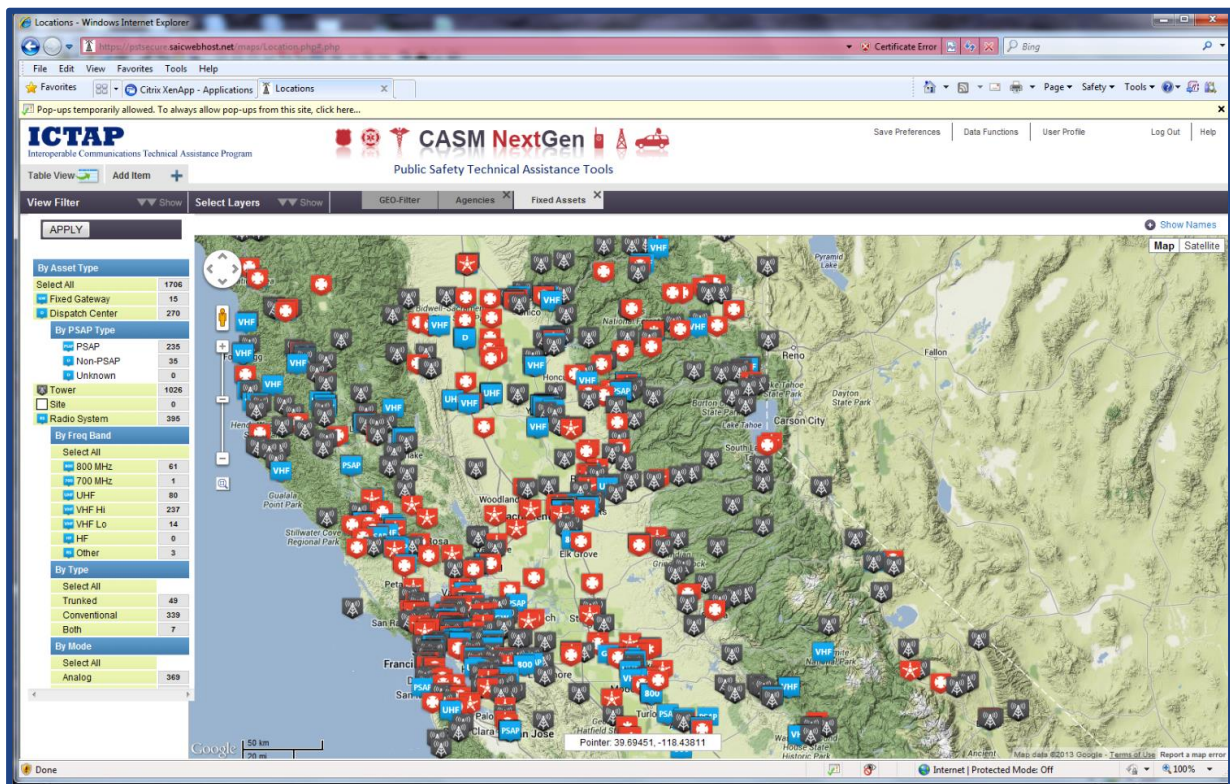
CASM provides: A single repository for information about land mobile radio systems, methods of interoperability and how they are used by emergency responders.

CASM-STRAT: Roll-Out Strategy Webinar

Description

This service offering provides support to develop the appropriate roll-out strategy for the State/Territory, tribe, region, or urban area using best-practices and lessons learned from across the Nation as a reference. OEC/ICTAP staff will conduct a CASM strategy webinar with an area's interoperability leadership (for example, SWIC, SIEC, SIGB, and Interoperability Committee) to assist with the following:

- Defining a roll-out strategy based on identified goals
- Reviewing existing approaches in achieving like goals
- Identifying CASM uses to achieve interoperability goals
- Recommending AM hierarchy
- Identifying resources to support CASM
- Establishing a timeline

Deliverables
- CASM strategy webinar
- Data collection guide
- Documented CASM roll-out strategy

CASM-TRAIN: Training

Description

This service offering provides training for the CASM application, either on-site at the requestor's facility or on-line via webinar. An OEC/ICTAP instructor presents the basic operations of the CAS and CAM components. The seminar includes the use of CAS to enter, edit, and delete information about agencies, communication assets (such as radio systems, dispatch centers, mutual aid channels/systems, gateways, and radio caches), and agency usage of the assets. The seminar also includes the use of CAM to display CAS-entered data on a map-based interface and use of analysis tools for displaying agency-to-agency interoperability, including interoperability gaps, in various ways.

A typical on-site training session is a four-hour presentation that combines lecture with participants' hands-on use of the CASM application. The presentation is typically provided in two, two-hour long sessions via telephone conference and webinar meeting. CASM also provides monthly online training. This training, typically offered three times a month, is available to all on a first come basis, and does not require a separate TA request to participate. Each session focuses on one CASM feature or function and is an hour long. All CASM users are invited to participate.

Deliverable

- Training brief

Appendices

Appendix A: TA Catalog and On-line TA Request Form

The OEC/ICTAP TA Request Form for SWICs' use and the TA Engagement Evaluation Form for stakeholders' feedback are posted with instructions for their completion at: www.publicsafetytools.info

Questions about the forms may be directed to OEC@dhs.gov.

Appendix B: OEC Regional Coordinators

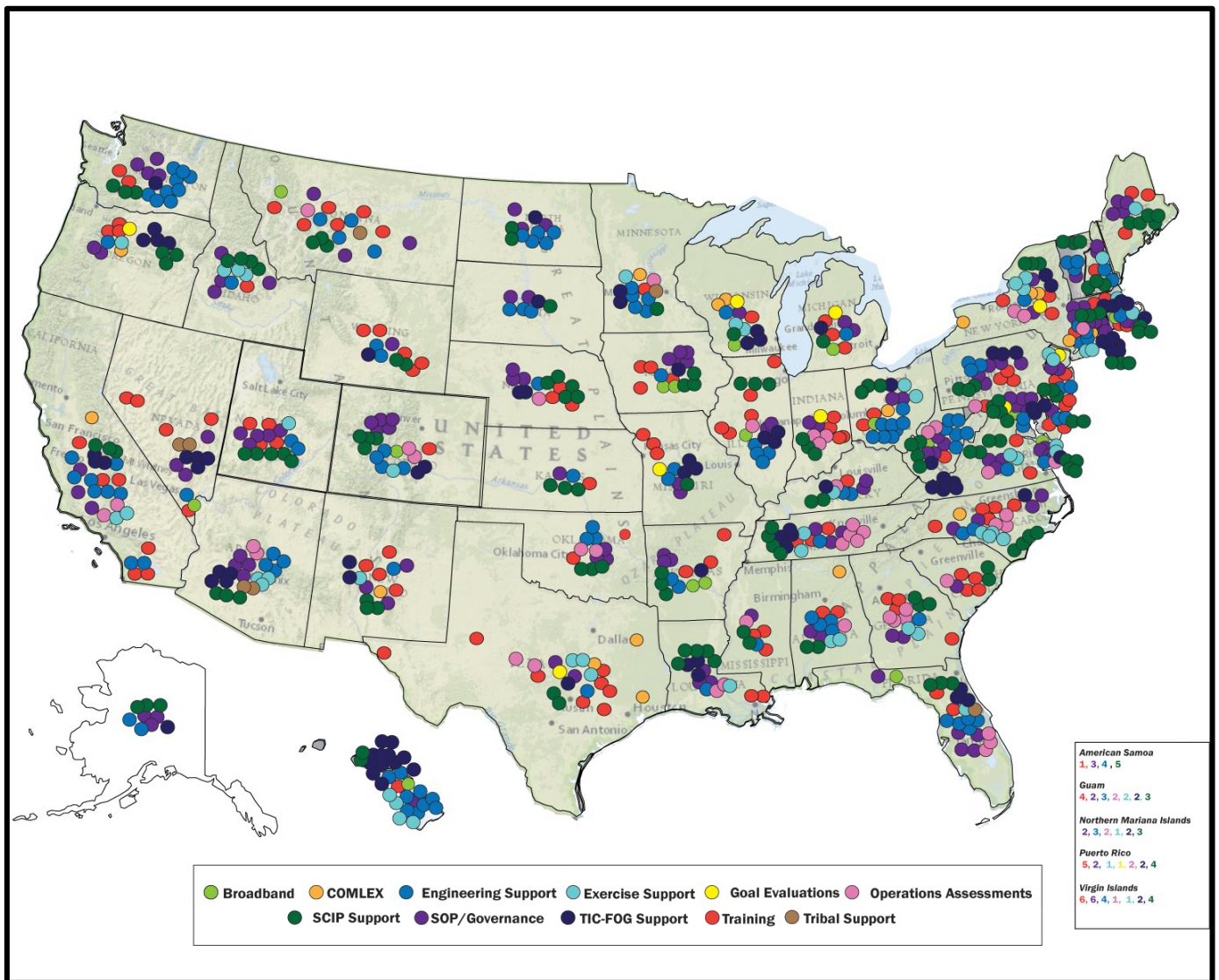| Region	OEC Regional Coordinator
Region I Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont	**Rick Andreano** richard.andreano@dhs.gov
Region II New Jersey, New York, Puerto Rico, US Virgin Islands	**Chris Tuttle** christopher.tuttle@dhs.gov
Region III District of Columbia, Delaware, Maryland, Pennsylvania, Virginia, West Virginia	**Marty McLain** marty.mclain@dhs.gov
Region IV Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee	**John MacLean** john.d.maclean@dhs.gov
Region V Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin	**Jim Jarvis** james.jarvis@dhs.gov
Region VI Arkansas, Louisiana, New Mexico, Oklahoma, Texas	**Ken Born** kenneth.born@dhs.gov
Region VII Iowa, Kansas, Missouri, Nebraska	**Jim Lundsted** james.lundsted@dhs.gov
Region VIII Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	**Dan Hawkins** daniel.hawkins@dhs.gov
Region IX Arizona, California, Nevada, Hawaii, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands	**Tom Lawless** thomas.lawless@dhs.gov
Region X Alaska, Idaho, Oregon, Washington	**Bruce Richter** bruce.richter@dhs.gov

Appendix C: Glossary of Terms/Acronyms

Acronym/Abbreviation	Definition
AAR	After Action Report
AM	Administrative Manager
ATP	Acceptance Test Plans
CAM	Communication Assets Mapping [component of CASM]
CAP	Corrective Action Program
CAS	Communication Assets Survey [component of CASM]
CAT	Coverage Acceptance Test
CASM	Communication Assets Survey and Mapping Tool
CDP	Center for Domestic Preparedness
COG	Continuity of Government
COMC	Communications Unit Coordinator
COML	Communications Unit Leader
COMT	Communications Unit Technician
COMU	Communications Unit
COOP	Continuity of Operations Plan
DHS	Department of Homeland Security
EDT	Exercise Design Team
EEG	Exercise Evaluation Guidelines
EMAC	Emergency Management Assistance Compact
EMI	Emergency Management Institute
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPT	Exercise Planning Team
ESF	Emergency Support Function
EXPLAN	Exercise Plan
FCC	Federal Communications Commission
FE	Functional Exercise
FEMA	Federal Emergency Management Agency
FMT	Frequency Management Tool
FPM	Final Planning Meeting
FSE	Full Scale Exercise
GETS	Government Emergency Telecommunications Service
GIS	Geographic Information System
GOV	Governance
HSEEP	Homeland Security Exercise and Evaluation Program
HSPD	Homeland Security Presidential Directive
IAP	Incident Action Plan
ICS	Incident Command System
ICTAP	Interoperable Communications Technical Assistance Program
IP	Improvement Plan
IPM	Initial Planning Meeting
LMR	Land Mobile Radio
LTE	Long Term Evolution

Acronym/Abbreviation	Definition
MAA	Mutual Aid Agreement
MACS	Multi-Agency Coordination System
MCV	Mobile Communication Vehicle
MDST	Mobile Data Survey Tool
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSEL	Master Scenario Events List
NBP	National Broadband Plan
NECP	National Emergency Communications Plan
NEXS	National Exercise Schedule System
NFA	National Fire Academy
NIFOG	National Interoperability Field Operations Guide
NIMS	National Incident Management System
NLST	Narrowband License Status Tool
NPSBN	National Public Safety Broadband Network
NRF	National Response Framework
NSSE	National Security Significant Events
NTIA	National Telecommunications Information Administration
NWCG	National Wildfire Coordinating Group
OEC	Office of Emergency Communications
OP	Operations[al]
POC	Point of Contact
PSAP	Public Safety Answering Point
PSBL	Public Safety Broadband Licensee
PSCC	Public Safety Communications Center
PTB	Position Task Book
RC	Regional Coordinator
REACT	Radio Emergency Associated Communications Team
RF	Radio Frequency
RFP	Request for Proposal
RLCT	Response Level Communications Tool
RoIP	Radio over Internet Protocol
SAA	State Administrative Agency
SAR	Suspicious Activity Reporting
SCIP	Statewide Communication Interoperability Plan
SCMP	Strategic Communications Migration Plan
SIEC	Statewide Interoperability Executive Council
SIGB	Statewide Interoperability Governance Board
SITMAN	Situation Manual
SLIGP	State and Local Interoperability Grant Program
SME	Subject Matter Expert
SOP	Standard Operating Procedure
STR	Strategic Technology Reserve
SWIC	Statewide Interoperability Coordinator
TA	Technical Assistance
TCL	Target Capabilities List
TERT	Telecommunicator Emergency Response Taskforce

Acronym/Abbreviation	Definition
THSP	Technical Specialist
TICFOG	Tactical Interoperable Communications Field Operations Guide
TICP	Tactical Interoperable Communications Plan
TTT	Train-The-Trainer
TTX	Table Top Exercise
UASI	Urban Area Security Initiative
ULS	Universal Licensing System
VoIP	Voice over Internet Protocol

1,000 Technical Assistance Deliveries
(As of August 2013)

American Samoa
1, 3, 4 , 5

Guam
4, 2, 3, 2, 2. 3

Northern Mariana Islands
2, 3, 2, 1, 2, 3

Puerto Rico
5, 2, 1, 1. 2, 4

Virgin Islands
6, 6, 4, 1, 1, 2, 4

Legend:
- ● Broadband
- ● COMLEX
- ● Engineering Support
- ● Exercise Support
- ● Goal Evaluations
- ● Operations Assessments
- ● SCIP Support
- ● SOP/Governance
- ● TIC-FOG Support
- ● Training
- ● Tribal Support

OEC/ICTAP has provided each of the 56 States/Territories with multiple service offerings since its inception in 2007. The most popular TA service offerings are shown in the Training category which includes Communication Unit Leader Training and Communication Technician Training.